CURRICULUM VITAE

PERSONAL DATA

Name: GERARDO SCHNEIDER
Place of Birth: Paysandú, Uruguay
Nationality: Swedish / Uruguayan
Contact Address: Department of Computer Science and Engineering
Chalmers University of Technology
S-412 96 Gothenburg, Sweden
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Phone: +46 (0)31 772 6073
Degrees: Ph.D. in Computer Science (VERIMAG, France)
M.Sc. in Computer Science (UFRGS - Brazil)
System Engineer (UTN - Argentina)
System Analyst (UTN - Argentina)

SOME RELEVANT LINKS

ORCID: `https://orcid.org/0000-0003-0629-6853`
Google Scholar: `https://scholar.google.se/citations?user=NAo67wgAAAAJ&hl=en`
DBLP: `https://dblp.uni-trier.de/pers/hd/s/Schneider:Gerardo.html`
Research Gate: `https://www.researchgate.net/profile/Gerardo_Schneider`
Full CV: `http://www.cse.chalmers.se/~gersch/cv.pdf`
Publications: `http://www.cse.chalmers.se/~gersch/publication.html`

CURRENT POSITION

– Since July 2009 I have been at the Department of Computer Science and Engineering (CSE), a shared department between Chalmers and the University of Gothenburg, Sweden. Since July 2014 I am a full professor at CSE, University of Gothenburg. [1]
– Since Apr 2010: Associated Researcher (*Investigador Asociado –Ad honorem*) to the Uruguayan National Research & Innovation Agency (*Asociación Nacional de Investigación e Innovación —ANII*), Uruguay.

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[1] I've been Associate Professor (*Universitetslektor*) at the Department of Applied IT Jul 2009–Jul 2010. Till Dec 2011 I have been at the Software Engineering division; have joined the Software Technology division in Jan 2012. Passed the habilitation (*Docent*) in Oct 2010.

STUDIES

- 1998 - 2002: VERIMAG[2]/UJF. Grenoble, France.
  Graduate Course: Ph.D. in Computer Science.
  Thesis Title: Algorithmic Analysis of Polygonal Hybrid Systems.
  Mention: *Très Honorable.* Date of degree: 18.02.2003.
- 1994 - 1995: UFRGS (Universidade Federal do Rio Grande do Sul). Porto Alegre, Brazil.
  Thesis Title: Sequential and parallel computation strategies on coherence spaces.
  Graduate Course: M.Sc. in Computer Science (Two-year course).Grade: 10 out of 10 points. Date of degree: 20.02.1997.
- 1986 - 1992: U.T.N. (Universidad Tecnológica Nacional). Concepción del Uruguay, Argentina.
  Course: Information System Engineering (Six-year course).
  Titles: System Analyst / Information System Engineer. Grade: 8.7 out of 10 points. Date of degree: 02.04.1993.
- Feb. - Oct. 1990: E.S.L.A.I. (Escuela Superior Latino-Americana de Informática), Universidad Nacional de Luján. La Plata, Argentina.
  Course: Licentiate in Computer Science (Three-year course). For 1 semester[3].
- 1980 - 1985: High School - Paysandú, Uruguay. Scientific Baccalaureate. Option: Engineering.

AREAS OF INTEREST

- Logics in Computer Science
- Formal methods for the specification, derivation and verification of infinite, concurrent and distributed embedded and real-time systems
- Runtime verification and combination with other verification techniques
- Specification and analysis of normative (legal) documents
- Applications of machine learning and AI (and combination of ML/AI with formal methods)
- Privacy & Security

PUBLICATIONS

- See Appendix A.

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[2] Created in 1993, VERIMAG is an academic research laboratory affiliated with: 1. The scientific University of Grenoble (UJF); 2. The National Research Center (CNRS); 3. Grenoble Polytechnic Institute (INPG).

[3] E.S.L.A.I. course was not finished because the University was closed in October 1990 by economical and political reasons. There the students used to have a scholarship that included: a salary, an apartment, transportation and food. They all were full time students and got into the School after passing an entry examination open to all South America. Only 35 students per year were accepted.

COMMISSIONS OF TRUST

– Since Dec 2023: *Head of the Data Science and Artificial Intelligence (DSAI) Division*, Department of Computer Science and Engineering, Chalmers and University of Gothenburg.
– Jul 2019 Dec 2023: Member of the CHAIR AI Ethics Committee, Chalmers.
– Jan 2017- Dec 2023: *Head of the Formal Methods Division*, Department of Computer Science and Engineering, Chalmers and University of Gothenburg.
– May 2022 - May 2023: Member of the Technical Review Committee for the Research Programme in Computational Law (the "Programme") at the Centre for Computational Law, Singapore Management University.
– Jul 2015 - Dec 2016: *Vice-Head of Division* (*"Line Manager"* for part of the personnel), Software Technology Division, Department of Computer Science and Engineering, Chalmers and University of Gothenburg.
– Jan 2013 - Apr 2015: *Director of Postgraduate Studies* Doctoral School, Department of Computer Science and Engineering, Chalmers and University of Gothenburg.

PATENTS

– *Détermination de nombres d'appel de méthode critique dans une application en langage objet.* IRISA/INRIA: Thomas Jensen, Gerardo Schneider, David Pichardie and David Cachera; France Telecom: Cuihtlauac Alvarado and Pierre Cregut. Transferred to France Telecom by IRISA/INRIA. French Patent Office: No. FR 06 51821. International reference number: PCT/FR2007/051242, submitted 10-05-2007.

RECENT TEACHING ACTIVITIES[4]

– 2020-2023 (spring - current teaching): "Principles of Concurrent Programming" (DIT391 / TDA384). Second year, study period 3, Computer Science and Engineering Bachelor programme, Chalmers | University of Gothenburg, Sweden. Credits: 7.5 HEC. Role: Responsible/Lecturer. (110-170 students)
– 2012-2017 (spring): "Model-Based Testing" (DIT848 / DAT260). First year, study period 4, Software Engineering Master programme, Chalmers | University of Gothenburg, Sweden. Credits: 7.5 HEC. Role: Responsible/Lecturer. (30-40 students)
– 2010-2012 (spring): "Test and Verification" (DIT085). 4th semester, Software Engineering and Management bachelor programme, Chalmers | University of Gothenburg, Sweden. Credits: 6 HEC. Role: Responsible/Lecturer. (70-90 students)
– 2010, 2011 (spring): "Technical Challenge Project" (DIT597). 2nd semester Software Engineering and Management Master programme, Chalmers | University of Gothenburg, Sweden. Credits: 15 HEC. Role: Coordinator/Supervisor. (35-55 students)

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[4] I list here only my teaching activities since January 2005. See Appendix B for a more detailed description on my previous teaching.

- 2009 (fall): "Software Architecture for Distributed Systems – Project" (TIG029). A 3rd semester course on the Software Engineering and Management bachelor programme, Chalmers | University of Gothenburg, Sweden. Credits: 15 HEC. Role: Coordinator/Supervisor. (37 students)
- 2009 (fall): "Industrial Challenge Project" (TIA049). 1st semester, Software Engineering and Management Master programme, Chalmers | University of Gothenburg, Sweden. Credits: 15 HEC. Role: Supervisor. (37 students)
- 2009 (fall): "Seminars in Software Engineering" (TIA051). For 1st semester Master students on the Software Engineering and Management programme, Chalmers | University of Gothenburg, Sweden. Credits: 7.5 HEC. Role: Responsible/Lecturer/Supervisor. (40 students)
- 2009 (spring): "Specification and verification of parallel systems" (INF5140, *Kravspesifikasjon og verifikasjon av parallelle systemer*). A course for MSc and PhD students. Univ. of Oslo, Norway. Role: Responsible/Lecturer.
- 2008 (fall): "Programming Languages" (INF3110, *Programmeringsspråk*), a 3rd year course on principles (paradigms) of programming languages. Univ. of Oslo, Norway. Role: Lecturer.
- 2008 (spring): "Selected topics on static analysis", INF5906 A course for M.Sc. and PhD students. Univ. of Oslo, Norway. Role: Lecturer.
- 2007 (spring): "Specification and verification of parallel systems" (INF5140). Univ. of Oslo, Norway. Role: Responsible/Lecturer.
- 2006 (spring): "Specification and verification of parallel systems" (INF5140), Univ. of Oslo, Norway. Role: Responsible/Lecturer.
- 2005 (spring): "Programming Languages" (INF3110/4110, *Programmeringsspråk*), Univ. of Oslo, Norway. Role: Lecturer.

POST-DOCTORAL "SUPERVISION"

1. Jun 2018 - Dec 2020: Sandro Stucki, post-doctoral researcher at the University of Gothenburg. Topic: *Foundations of privacy.*
2. Sep 2016 - Oct 2019: Pablo Picazo Sánchez, post-doctoral researcher at the University of Gothenburg. Topic: *Security and privacy.*
3. Apr 2017 - Mar 2018: Srinivas Pinisetty, post-doctoral researcher at the University of Gothenburg. Topic: *Runtime verification of contracts.*
4. Mar 2015 - Dec 2016: Thibaud Antignac, post-doctoral researcher at Chalmers. Topic: *Privacy-by-design and foundations of privacy.*

PhD SUPERVISION Main supervisor

1. Jun 2020 - Mar 2024: William Hughes –Ph.D. student Gothenburg University. Title: *Domain Specific Languages for Legal Executable Contracts.* - Licentiate
2. Nov 2016 - Aug 2022: Hanaa Alshareef –Ph.D. student Chalmers. Title: *Model-based Approaches to Privacy Compliance.* PhD defense: Aug 30, 2022.
3. Jan 2013 - Nov 2017: Raúl Pardo Jiménez –Ph.D. student Chalmers. Title: *Privacy Policies for Social Networks — A Formal Approach.* PhD defence: Nov 22, 2017.

4. Sep 2013 - Nov 2017: John J. Camilleri –Ph.D. student Gothenburg University. Title: *Contracts and Computation — Formal Modelling and Analysis for Normative Natural Language.* PhD defence: Nov 1st, 2017.

5. Apr 2008 - Jun 2012: Hallstein A. Hansen –Ph.D. student Univ. of Oslo. Title: *Safety verification of planar, nonlinear, complex control systems by over-approximation.* PhD defence: Jun 7, 2012.

6. Oct 2006 - Dec 2010: Cristian Prisacariu –Ph.D. student Univ. of Oslo. Title: *A Dynamic Deontic Logic over Synchronous Actions.* PhD defence: Dec 8, 2010.

Co-supervisor

1. Since Dec 2023: Alejandro Luque Cerpa – Ph.D. student, Chalmers. (Main supervisor: Hazem Torfah). Working on *Controller Synthesis and Machine Learning.*

2. Since Jan 2022: David Lidell –Ph.D. student, University of Gothenburg. (Main supervisor: Nir Piterman). Working on *Controller Synthesis and Run-time Verification.*

3. Since Jan 2019: Karam Kharraz – Ph.D. student, University of Lübeck (Germany). (Main supervisor: Martin Leucker). Working on *Real-Time Deontic Logics.*

4. Mar 2019 - Jun 2022: Claudia Cauli –Ph.D. student, University of Gothenburg. (Main supervisor: Nir Piterman). Working on *Pre-deployment Description Logic-based Reasoning for Cloud Infrastructure Security.* PhD defence: Jun 17, 2022.

5. Sep 2019 - Jun 2021: Piergiuseppe Mallozzi –Ph.D. student, University of Gothenburg. (Main supervisor: Patrizio Pelliccione). Title: *Designing Trustworthy Autonomous Systems* PhD defence: Jun 9, 2021.

6. May 2014 - Feb 2019: Mahsa Varshosaz – Ph.D. student, University of Halmstad. (Main supervisor: Mohammad Reza Mousavi.) Title: *Model-Based Testing of Software Product Lines.* PhD defence: Feb 27, 2019.

7. Sep 2013 - Mar 2019: Mauricio Chimento –Ph.D. student, Chalmers. (Main supervisor: Wolfgang Ahrendt.) Title: *Combined Static and Dynamic Verification of Object Oriented Software Through Partial Proofs.* PhD defence: Jun 2019

8. Sep 2013 - Feb 2018: Hamid Ebadi –Ph.D. student, Chalmers. (Main supervisor: David Sands.) Title: *Dynamic Enforcement of Differential Privacy.* PhD defence: Mar 5, 2018.

9. Sep 2011 - Dic 2013: Gabriele Paganelli –Ph.D. student, Chalmers. (Main supervisor: Wolfgang Ahrendt.) Working on *Verification-based test case generation.* (Completed the licentiate degree.)

10. Oct 2005 - Mar 2011: Einar W. Høst –Ph.D. student, Univ. of Oslo. (Main supervisor: Bjarte M. Østvold.) Title: *Interactive Tool Support for Agile Development* PhD defence: Mar 2, 2011.

PARTICIPATION AS PH.D. JURY MEMBER

1. Apr 2024: PhD Jury member (reviewer) of the thesis *Decentralized and Distributed Stream Runtime Verification* by Luis Miguel Danielsson. IMDEA Software, Spain

2. Feb 2023: PhD Jury member (reviewer) of the thesis *Software Doping: Theory and Detection* by Sebastian Biewer. Dependable Systems and Software, Saarland University, Germany.

3. Nov 2022: PhD Jury member (reviewer) of the thesis *Blockchain-based Malware Incident Response for Internet of Things* by Ahmed Lekssays. Department of Theoretical and Applied Sciences at the University of Insubria, Italy.

4. Jan 2021: PhD Jury member (stand-in) of the thesis *Efficiency and Automation in Threat Analysis of Software Systems* by Katja Tuma. Dept. of Computer Science and Engineering, Chalmers University of Technology, Sweden.

5. Sep 2020: PhD Jury member (reviewer) of the thesis *Enhancing Information and Consent in the Internet of Things* by Victor Morel. Institut National des Sciences Appliqués de Lyon (INSA), France.

6. Apr 2020: PhD Jury member (grading committee member) of the thesis *Incremental Fault Diagnosability and Security/Privacy Verification* by Mona Noori-Hosseini. Dept. of Electrical Engineering, Chalmers University of Technology, Sweden.

7. Feb 2019: PhD Jury member (reviewer) of the thesis *From Behavioural Contracts to Smart Contracts* by Nicola Atzei. University of Cagliari, Italy.

8. Sep 2018: PhD Jury member (stand-in) of the thesis *Be More and Be Merry: Enhancing Data and User Authentication in Collaborative Settings* by Elena Pagnin. Dept. of Computer Science and Engineering, Chalmers University of Technology, Sweden.

9. Oct 2017: PhD Jury member (stand-in) of the thesis *Enhancing Privacy in the Advanced Metering Infrastructure: Efficient Methods, the Role of Data Characteristics and Applications* by Valentin Tudor. Dept. of Computer Science and Engineering, Chalmers University of Technology, Sweden.

10. Sep 2016: PhD Jury member (stand-in) of the thesis *Automating Black-Box Property Based Testing* by Jonas Almström Duregård. Dept. of Computer Science and Engineering, Chalmers University of Technology, Sweden.

11. Feb 2015: PhD Jury member (reviewer) of the thesis *Méthodes formelles pour le respect de la vie privée par construction* by Thibaud Antignac. Institut National des Sciences Appliqués de Lyon (INSA), France.

12. Jul 2014: PhD Jury member (evaluator) of the thesis *Verification and Validation of Web Service Compositions using Formal Methods* by José Antonio Mateo Cortés. University of Castilla-La Mancha, Spain.

13. Nov 2013: PhD Jury member (grading committee) of the thesis *Tracking Dependencies for Security and Privacy* by Arnar Birgisson. Dept. of Computer Science and Engineering, Chalmers University of Technology, Sweden.

14. Mar 2013: PhD Jury member (stand-in) of the thesis *Model-Based Analysis of Critical Resources in Automotive System Architectures* by Keneth Lind. Dept. of Computer Science and Engineering, Chalmers University of Technology, Sweden.

15. Jun 2012: PhD Jury member (reviewer) of the thesis: *A Formal Framework for Specifying and Analyzing Liabilities Using Log as Digital Evidence* by Eduardo Mazza. INRIA / VERIMAG, France.
16. May 2012: Opponent to Licentiate defense of Siavash Soleimanifard, title: *Procedure-Modular Verification of Temporal Safety Properties*, KTH, Sweden.
17. Oct 2011: PhD Jury member (stand-in) of the thesis *Lightweight Enforcement of Fine-Grained Security Policies for Untrusted Software* by Phu H. Phung. Dept. of Computer Science and Engineering, Chalmers University of Technology, Sweden.
18. Aug 2011: PhD Jury member (reviewer) of the thesis *Contractual Verification of Web Service Compositions with Time Constraints* by Enrique Martínez López. University of Castilla-La Mancha, Spain.
19. Feb 2011: PhD Jury member (examiner) of the thesis: *Design, Verification and Implementation of Component-based Systems* by Imen Ben-Hafaiedh. VERIMAG (University Grenoble I), France.
20. Mar 2008: PhD Jury member (reviewer) of the thesis *Automating the Negotiation of Agreements* by Manuel Resinas. University of Sevilla, Spain
21. Nov 2007: PhD Jury member (reviewer) of the thesis *Parametric Specification of Dynamic Memory Utilization* by Diego Garbervetsky. University of Buenos Aires, Argentina.

INVOLVEMENT IN OTHER DOCTORAL ACTIVITIES

Examiner of PhD Students

1. Since May 2024: Ehsan Edalat, Topic: *Software/web/IoT security* (Supervisor: Andrei Sabelfeld). Chalmers, Sweden.
2. Since March 2024: George Granberry, Topic: *LLMS and Formal Methods* (Supervisor: Wolfgang Ahrendt). Chalmers, Sweden.
3. Since Mar 2024: Yixing Zhang, Topic: *Monitoring for Large Distributed Systems* (Supervisor: Romaric Duvignau). Chalmers, Sweden.
4. Since Jan 2024: Ankani Chattoraj, Topic: *Machine Learning* (Supervisor: Devdatt Dubhsashi). Chalmers, Sweden.
5. Since Jan 2024: Ekaterina Voloshina, Topic: *Automatic Generation of Wikipedia Articles* (Supervisor: Krasimir Angelov). University of Gothenburg, Sweden.
6. Since 2022: Eric Olsson, Topic: *Security and Privacy* (Supervisor: Andrei Sabelfeld). Chalmers, Sweden.
7. Since 2021: Prabhat Kumar Jha, Topic: *Controller synthesis and games* (Supervisor: Nir Piterman). University of Gothenburg, Sweden.
8. Since 2019: Razan Ghzouli, Topic: *Mission assurance for mobile robots* (Supervisor: Thorsten Berger). University of Gothenburg, Sweden.
9. Since 2019: Ricardo Caldas, Topic: *From Chance to Choice: Strategies to Attaining Resilience in Cyber-Physical Systems* (Supervisor: Patrizio Pelliccione). University of Gothenburg, Sweden.
10. 2017–2024: Oliver Harms, Topic: *Scheduling of Low-power Wireless Sensor Networks* (Supervisor: Olaf Landsiedel). Chalmers, Sweden.

11. 2017–2023: Alejandro Gómez Londoño, Title: *Choreographies and Cost Semantics for Reliable Communicating Systems* (Supervisor: Magnus Myreen). Chalmers, Sweden.
12. 2017–2022: Oskar Abrahamsson, Title: *A Verified Theorem Prover for Higher-Order Logic* (Supervisor: Magnus Myreen). Chalmers, Sweden.
13. 2017–2022: Dimitrios Palyvos Giannas, Title: *Explainable and Resource-Efficient Stream Processing Through Provenance and Scheduling* (Supervisor: Vincenzo Gulisano). Chalmers, Sweden.
14. 2018–2022: Benjamin Eriksson, Title: *Securing the Next Generation Web* (Supervisor: Andrei Sabelfeld). Chalmers, Sweden.
15. 2017–2021: Sergio Garcia, Title: *Service Robotics Software Engineering* (Supervisor: Patrizio Pelliccione). University of Gothenburg, Sweden.
16. 2016–2022: Yu-Tin "Jeff" Chen, Topic: *Robust and Flexible Intermediate Verification* (Supervisor: Carlo Furia). Chalmers, Sweden.
17. 2017–2022: Iulia Bastys, Thesis title: *Principled Flow Tracking in IoT and Low-Level Applications.* (Supervisor: Andrei Sabelfeld). Chalmers, Sweden.
18. 2015–2020: Alexander Sjösten, Thesis title: *Information Flow for Web Security and Privacy* (Supervisor: Andrei Sabelfeld). Chalmers, Sweden.
19. 2013–2018: Mikael Kågebäck, Thesis title: *Word Representations for Emergent Communication and Natural Language Processing* (Supervisor: Devdatt Dubhashi). Chalmers, Sweden.
20. 2013–2018: Daniel Hausknecht, Title of thesis: *Web Application Content Security* (Supervisor: Andrei Sabelfeld). Chalmers, Sweden.
21. 2012–2015: Émil Alégroth, Title of thesis: *Visual GUI Testing: Automating High-Level Software Testing in Industrial Practice* (Supervisor: Robert Feldt). Chalmers, Sweden.
22. 2012–2013: Joel Wilson, Topic: *Machine Learning, Big Data* (Supervisor: Devdatt Dubhashi). Chalmers, Sweden

Member of PhD Advisory Committees

1. 2010: Member of the PhD Advisory Committee of Ran Ji. Dept. of Computer Science and Engineering, Chalmers Institute of Technology, Sweden.
2. 2011: Member of the PhD Advisory Committee of Jonas Duregård. Dept. of Computer Science and Engineering, Chalmers Institute of Technology, Sweden.
3. 2011: Member of the PhD Evaluation Committee of the following students at the Dept. of Informatics, University of Oslo, Norway.
   – Lizeth Tapia Tarifa
   – Crystal Din
   – Violet Pun
   – Lucian Bentea

Member of Doctoral Symposiums

– PC member of the Doctoral Symposium affiliated with FCT 2011. 26 Aug 2011, Oslo, Norway. `http://fct11.ifi.uio.no/index.php?n=Workshops.DoctoralSymposium`

SUPERVISION AND EXAMINATION OF MASTER AND BACHELOR THESES
Supervision of MSc theses

1. Since Jan 2024: Fredrik Hamrefors and Adam Törnkvist – M.Sc. students in Computer Science at Chalmers. Title: *OIDC/OAuth2 for user authentication on mobile apps without browser redirection.*
2. Nov 2022 - June 2023: Stephen Odhiambo –M.Sc. student in Software Engineering at the University of Gothenburg. Title: *Smart Contract Negotiation using Upgradable Smart Contracts.*
3. Jan-Jun 2022: Theodor Angergård and Tobias Karlsson –M.Sc. students in Computer Science at Chalmers. Title: *Realizing Privacy-Aware Data Flow Diagrams In Java.* (Together with Sandro Stucki)
4. Feb-Jun 2020: Andreas Dominik Koj –M.Sc. student in Computer Science at Chalmers. Title: *Feature extraction for similarities of complex items using Machine Learning*
5. Oct 2019 - Sep 2020: Arbnor Biljali and Valon Huskaj –M.Sc. students in Computer Science: Algorithms, Language and Logic at Chalmers. Title: *Privacy for Mobile Social Network.*
6. Jan 2019 - Oct 2020: Joel Andersson and Gustav Örtenberg –M.Sc. students in Computer Science at Chalmers. Title: *Adversarial Black-Box Attacks in the Domain of Device Fingerprints*
7. Jan-May 2020: Anna Brunzell & Nellie Edvardsson –M.Sc. students in Computer Science: Algorithms, Language and Logic at Chalmers. Title: *Threat Model and Implementation of Security Measures in a Microservice Architecture.*
8. Aug 2019 - Feb 2020: Denis Furian –M.Sc. student in Computer Science: Algorithms, Language and Logic at Chalmers. Title: *A Runtime Verification Framework for Kotlin Mobile Applications*
9. Jan 2016 - May 2019: Mohammad Reza Haghshenas –M.Sc. student in Software Engineering at University of Gothenburg. Title: *Tools and Techniques for Querying Normative Documents.*
10. Jan-Sep 2018: Vaios Taxiarchis and Malama Kasanda –M.Sc. students in Computer Systems and Networks at Chalmers. Title: *Comparative Analysis of Blockchain Technologies for Data Ownership and Smart Contract Negotiation*
11. Jan-Jun 2018: Axel Arkheden and Fredrik Enetorp –M.Sc. students in Computer Science at Chalmers. Title: *A Taxonomy of Browser Extensions.* (Together with Pablo Picazo-Sanchez)
12. Jan-Aug 2018: Joakim Sundling and Gustav Axelsson. –M.Sc. students in Computer Systems and Network at Chalmers. Title: *Who changed my browser settings? Silently modifying the Secure Preferences of Chrome.* (Together with Pablo Picazo-Sanchez)
13. Jan-Jun 2018: Albin Garpetun and Jim Bengtsson –M.Sc. students in Computer Science: Algorithms, Language and Logic at Chalmers. Title: *You are touching me! A Monitoring Mechanism for Secure Key Generation.* (Together with Pablo Picazo-Sanchez)

14. Feb-Oct 2017: Doni Ramadhan –M.Sc. student in Software Engineering at Chalmers. Title: *Secure Migrating Monitors in Internet of Things.* (Together with Pablo Picazo-Sanchez)

15. Jan-Jul 2017: Mushfiqur Rahman –M.Sc. student in Computer Science: Algorithms, Language and Logic at University of Gothenburg. Title: *A Petri Net Semantics for Privacy-Aware Data Flow Diagrams.* (Together with Raúl Pardo)

16. Jan-Jun 2016: Ivana Kellyérová –M.Sc. student in Computer Science: Algorithms, Language and Logic at Chalmers. Title: *A Real-Time Extension of the Formal Privacy Policy Framework.* (Together with Raúl Pardo)

17. Jan-Jun 2016: Mukelabai Mukelabai –M.Sc. student in Software Engineering at University of Gothenburg. Title: *A Security Protocol to Ensure Surveillance Accountability.* (Together with Thibaud Antignac)

18. Dec 2015 - Jun 2016: Runa Gulliksson –M.Sc. student in Computer Science: Algorithms, Language and Logic at Chalmers. Title: *Automatic translation from SCL to Timed Automata.* (Together with John Camilleri)

19. Jan-Oct 2014: Caroline Strandberg and Johan Sjöblom –M.Sc. students in Computer Science: Algorithms, Language and Logic at Chalmers. Title: *Automatic Regression Testing using Visual GUI Tools.* Thesis prepared at the company *Saab AB* based in Gothenburg.

20. Jan 2012 - Nov 2013: Yashar Bizhanzadeh –M.Sc. student in Software Engineering at University of Gothenburg. Title: *Visualizing cyber attacks with misuse case maps.*

21. May 2012 - Feb 2013: Hamid Ebadi –M.Sc. student in Secure and Dependable Computer Systems at Chalmers University of Technology. Title: *PINQuin, a framework for differentially private analysis.*

22. Jan - Nov 2012: Naveed Qamar –M.Sc. student in Software Engineering at University of Gothenburg. Title: *Performance monitoring of web-based IT systems.* Thesis prepared at the company *Volvo IT* based in Gothenburg.

23. Jan 2010 - Oct 2012: Ismail Fakir –M.Sc. student in Software Engineering at University of Gothenburg. Title: *Dynamic runtime verification of contracts.*

24. Nov 2011 - Jun 2012: Robert Nagy and Aram Timofeitchik –M.Sc. students in Software Engineering at Chalmers University of Technology. Title: *Verification of real-time graphics systems.* Thesis prepared at *SVT (National Swedish Television)* based in Gothenburg.

25. Jan - Oct 2011: Pavel Rabetski –M.Sc. student in Software Engineering at University of Gothenburg. Title: *Migration of an on-premise application to the Cloud.* Thesis done at the company *InformaIT* based in Gothenburg.

26. Jan - Oct 2011: Venkata Kalyan Ram –M.Sc. student in Software Engineering at University of Gothenburg. Title: *Model-checking AUTOSAR basic software component.*

27. Jan - Oct 2011: Bharat Bhushan Konka –M.Sc. student in Software Engineering at University of Gothenburg. Title: *A case study on software testing methods and tools.* Thesis done at the company *Volvo Technology* based in Gothenburg.

28. Jan 2010 - Jun 2011: Aida Niknejad –M.Sc. student in Software Engineering at University of Gothenburg. Title: *A comparative analysis of mobile applications using Android.* Thesis done at the company *Logica* based in Gothenburg.
29. Sep 2009 - Jan 2010: Saeed Aghaee –M.Sc. student in Software Engineering at University of Gothenburg. Title: *Measuring the Quality of Mashup Components.*
30. Aug - Dec 2008: Stephen Fenech (co-supervisor) –M.Sc. student, Univ. of Malta. Title: *Conflict Analysis of Deontic Contracts.*
31. Apr - Aug 2007: Christian Colombo (local supervisor), M.Sc. student from Univ. of Malta visiting UiO as Erasmus student. Title: *Practical runtime monitoring with impact guarantees of Java programs with real-time constraints.*
32. 2005-2006: Øystein Torget (co-supervisor), M.Sc. student. Univ. of Oslo. Title: *Runtime Validation of Communication Histories.*

Supervision of bachelor theses

1. Mar-Jun 2012: Jon Kristensen. Software Engineering at Chalmers | University of Gothenburg. Title: *Designing a User Interface For an End-to-end Secure Messaging System*
2. Jan-Jun 2011: Arash Akbarinia, Javier Valdéz Medrano and Rashid Zamani. Software Engineering at Chalmers | University of Gothenburg. Title: *Speech Recognition for Noisy Environments.*
3. Jan-Jun 2011: Jon Fridéhn, Kimmi Sandhu, and Ran Tsoref. Software Engineering at Chalmers | University of Gothenburg. Title: *Extending Vehicle Telematics Services to Mobile Devices: An Architectural Approach.*
4. Jan-Jun 2011: Samaneh Tork Abadi. Software Engineering at Chalmers | University of Gothenburg. Title: *Construction of a Generic Reference Architecture for Mobile Applications.*
5. Jan-Jun 2010: Manuel Nagel and Ilija Pavlov. Software Engineering at Chalmers | University of Gothenburg. Title: *Reviewing how customers benefit in practice from their IT-service providers using lean.*
6. Jan-Jun 2010: Fredrik Olsofsson and Marcus Sjölin. Software Engineering at Chalmers | University of Gothenburg. Title: *Web UI.*
7. Jan-Jun 2010: Seyed Morteza Montazeri. Software Engineering at Chalmers | University of Gothenburg. Title: *Encoding of the contract language CL into the Grammatical Framework (GF).*
8. Mar 1997 - Dec 1998: I (co-)supervised 6 undergraduate students at UCPel, Brazil.

Examination of MSc theses

1. Since Oct 2024: Samuel Kajava – M.Sc. student in Computer Systems and Networks at Chalmers. Title: *Static Analysis for Detecting Prototype Pollution on The Web.*

2. Since 2022: Mattias Heinl –M.Sc. student in Algorithms, Language, and Logic at Chalmers. Title: *Specification and Verification of Solidity Smart Contracts, Maps, and Tokens*

3. Jan-Oct 2024: Albin Aspljung and Uzair Ahmad – M.Sc. students in Computer Systems and Networks at Chalmers. Title: *Instantaneous Bandwidth Approximation for Enhanced Quality of Experience in 5G Networks.*

4. Jan-Sep 2024: Andreas Stenwreth and Simon Täng – M.Sc. students in Computer Systems and Networks at Chalmers. Title: *Assessing discrepancies in cross-browser paywalls detection.*

5. Jan 2019 - Nov 2022: Richard Ahlin –M.Sc. student in Algorithms, Language, and Logic at Chalmers. Title: *Optimizing Stack Allocation for the CakeML Compiler.*

6. Oct 2021: José Solsona –Master in Engineering at ORT University, Uruguay. Title: *On the specification and verification of the PCR parallel programming pattern in TLA+.*

7. Jan-Aug 2021: Mattis Jeppsson –M.Sc. student in Computer Science at Chalmers. Title: *Translating point-in-time Metric Temporal Logic to Timed Automata.*

8. Jan-Jun 2020: Simon Mölzer –M.Sc. at Chalmers. Title *Evaluating IoT security frameworks within an electro-mechanical locking system.*

9. Sep 2018 - Apr 2020: William Hughes –M.Sc. student in Algorithms, Language, and Logic at Chalmers. Title: *MultiCall: an interpreter implemented on the Ethereum Virtual Machine.*

10. Mar 2020: Lars Eric Olsson –M.Sc. student in Algorithms, Language, and Logic at Chalmers. Title: *Securing IoT Apps in Node-RED.*

11. Jan-Sep 2019: Nebojsa Mihajlovic and John Lind –M.Sc. student in Computer Science: Algorithms, Languages, and Logic at Chalmers. Title *Improving CakeML with Hashtables and Buffered I/O.*

12. Jan-Oct 2019: Johan Magnusson and Niklas Tegnander –M.Sc. student at Chalmers. Title *Autocheck: Design and Implementation of an LTI-compatible Infrastructure for Running Automatic Checks.*

13. Sep 2018: Gunnar Örn Gunnarsson and Pedram Talebi –M.Sc. students in Algorithms, Language, and Logic at Chalmers. Title: *Privacy-Preserving Route Matching.*

14. Feb 2016: Robert Edström and Jack Pettersson –M.Sc. students in Algorithms, Language, and Logic at Chalmers. Title: *Safer Smart Contracts through Type-Driven Development.*

15. Sep 2015: Miriam Economou and Zeynep Gökmen –M.Sc. students in Algorithms, Language, and Logic at Chalmers. Title: *Optimizing UML diagram generation for complex systems.*

16. Oct 2011: Ingram Bondin –M.Sc student in Computer Science at the University of Malta. Title: *A Discrete Theory of Slowdown for Synchronous Programs.*

LEADERSHIP DEVELOPMENT

– May 2024: Course on Economy, Part I (*Ekonomispelet*) at Chalmers Institute of Technology, Sweden. (2 full days)
– Aug 2018: Course on Working Environment, Part I (*Arbetstmiljöutbildning del 1: Systematisk arbetsmiljöarbete och lagefterlevnad*) at Chalmers Institute of Technology, Sweden. (3 hours)
– Mar-Oct 2018: Chalmers' course *Leadership Program for Leaders* (*Chalmers ledarskapsprogrammet för chefer*) at Chalmers Institute of Technology, Sweden. (5 encounters of 2 full days each.)
– Jan 2018: Leadership Day (*Chefdagen: Att leda i en akademisk kontext*) at Chalmers Institute of Technology, Sweden.
– Jun 2016: Course on *Alcohol in the Working Place* (*Arbetsmiljöutbildning tema Alkohol*) at Chalmers Institute of Technology, Sweden.
– Jun 2016: Course on *Conflict Management* (*Arbetsmiljöutbildningen: Konflikthantering*) at Chalmers Institute of Technology, Sweden.
– Oct 2015: Course on *Leading Change* (*"Förändringsledning"*) at Chalmers Institute of Technology, Sweden.
– Oct–Nov 2015: Course on *Basic Management Training* (*"Grundläggande chefsutbildning"*) at Chalmers Institute of Technology, Sweden.

PEDAGOGICAL EDUCATION/ACTIVITIES

I have taken 20 HEC (Higher Education Credits) on pedagogical courses.

– 2010: Participated in a pedagogical project on *Constructive Alignment* at Chalmers Learning Center, at Chalmers Institute of Technology, Sweden. Besides attending two workshops (see below), the task consists in completely redesigning a (master level) course to align intended learning outcomes, teaching and learning activities, and assessment. 6 HEC.
  • Oct. 2010: Second workshop on "Constructive Alignment" given by Chalmers Learning Center, at Chalmers Institute of Technology, Sweden.
  • Jun. 2010: A first full day workshop on "Constructive Alignment" given by Chalmers Learning Center, at Chalmers Institute of Technology, Sweden.
– Feb. - Jun. 2010: *Teaching and Learning in Higher Education (HPE101*, pedagogical course given at Pedagogical Development and Interactive Learning (PIL) —Faculty of Education, University of Gothenburg, Sweden. 5 HEC.
– Mar. 2010: *Supervision of Research: Principles, Models and Issues (TLE202)*, course on PhD Supervision given at the Centre for Competence and Knowledge Building in Higher Education, Chalmers Institute of Technology, Sweden. 3 HEC.
– Sep. 2003: *I-RITE* course given by Carolyn Gale (Stanford University). A two-day workshop that gives researchers practice in describing their work to a broad audience. 12 hours classroom + 4 hours individual work. (Recognized in 2010 as equivalent to *TLE205: Popular Science Communication* (3 HEC) given at the Centre for Competence and Knowledge in Higher Education, Chalmers Institute of Technology, Sweden.)

– Oct. 2005: Took a tutorial on how to teach programming languages: "The concepts-based approach for teaching programming: how to put it into practice", by Peter Van Roy (*Université Catholique de Louvain*, Belgium).
– Aug. - Dec. 1996: *Seminar on Didactic and Pedagogy.* Part of the qualification program for lecturers at UCS, Brazil. 60-hours course. (Recognized in 2010 as equivalent to *TLC102: Teaching, Learning and Evaluation* (3 HEC) given at the Centre for Competence and Knowledge in Higher Education, Chalmers Institute of Technology, Sweden.)

OTHER PEDAGOGICAL AND ADMINISTRATIVE ACTIVITIES

– Initiated the contacts for an ERASMUS agreement between the University of Gothenburg (Sweden) and the University of Malta (Malta), and the University of Castilla – La Mancha (Spain). Agreements signed beginning of 2010.
– Pedagogical responsible for the ERASMUS/SOCRATES program between the Dept. of Informatics (IfI) at Univ. of Oslo, and:
  • January 2007 –2010: The University Paris 12, France.
  • March 2007–2010: The University of Malta
– 2008-2009: Member of the "ICT4D" (*ICT for Development*) group at IfI.

PROGRAMME COMMITTEES

1. 8th Workshop on Verification and Monitoring at Runtime Execution (VORTEX'25) - Bergen (Norway), 4 Jul 2025. `https://2025.ecoop.org/home/vortex-2025`
2. The 25th International Conference on Runtime Verification (RV'25). Graz (Austria), 15-19 Sep 2025. `https://rv25.isec.tugraz.at/`
3. 21st International Colloquium on Theoretical Aspects of Computing (ICTAC'24). Bangkok (Thailand), 25-29 November 2024. `https://ictac2024.cs.ait.ac.th`
4. The 24th International Conference on Runtime Verification (RV'24). Istanbul (Turkey), 15-18 Oct 2024. `https://yeni.cmpe.bogazici.edu.tr/rv24/`
5. The 23rd International Conference on Runtime Verification (RV'23). Thessaloniki (Greece), 3-6 Oct 2023. `https://rv23.csd.auth.gr/`
6. 20th International Colloquium on Theoretical Aspects of Computing (ICTAC'23). Lima (Peru), 04-08 December 2023. `https://ictac2023.compsust.utec.edu.pe`
7. 9th International Conference in Formal Methods and Software Engineering (FORMALISE'23). Melbourne, Victoria (Australia), 14-15 May 2023. `https://www.formalise.org/`
8. 20th International Conference on Software Engineering and Formal Methods (SEFM'22). Berlin (Germany) 26-30 Sep 2022. `https://sefm-conference.github.io/`
9. The 22nd International Conference on Runtime Verification (RV'22). Tbilisi (Georgia), 28-30 Sep 2022. `https://rv22.gitlab.io/`

10. 19th International Conference on Software Engineering and Formal Methods (SEFM'21). Virtual event, 6-10 Dec 2021. `https://sefm-conference.github.io/`

11. The 21st International Conference on Runtime Verification (RV'21). Los Angeles (USA), 11-14 Oct 2021. `https://uva-mcps-lab.github.io/RV21`

12. 5th International Workshop on Verification and mOnitoring at Runtime EXecution (VORTEX'21) (co-located with ECOOP'21). Aarhus (Denmark), 12 Jul 2021. `https://2021.ecoop.org/track/ecoop-issta-2021-vortex`

13. Reliable Smart Contracts: State-of-the-art, Applications, Challenges and Future Directions, a track of ISoLA 2020, Rhodes (Greece), 26-30 Oct 2020. `http://www.cs.um.edu.mt/gordon.pace/Workshops/RSC2020/` **(Co-Chair)**

14. The 20th International Conference on Runtime Verification (RV'20). Los Angeles (USA), 6-9 Oct 2020. `https://rv20.ait.ac.at/`

15. 18th International Conference on Software Engineering and Formal Methods (SEFM'20). Amsterdam (The Netherlands), 16-18 Sep 2020. `https://event.cwi.nl/sefm2020/`

16. 8th International Conference in Formal Methods and Software Engineering (FORMALISE'20). Virtual event, 25-26 May 2020. (Co-located with ICSE 2020) `https://www.formalise.org/content/formalise-2020`

17. PhD Symposium at iFM 2019 on Formal Methods: Algorithms, Tools and Applications (PhD-iFM'19). Bergen (Norway), 3 Dec 2019. `https://ifm2019.hvl.no/phd-symposium`

18. 1st International Workshop on "Formal Methods - Fun for Everybody" (FM-Fun'19). Bergen (Norway), 2-3 Dec 2019. `https://fmfun.github.io/`

19. 31st Nordic Workshop on Programming Theory (NWPT'19) - Tallinn (Estonia), 13-15 Nov 2019. `https://cs.ttu.ee/events/nwpt2019/`

20. The 19th International Conference on Runtime Verification (RV'19). Porto (Portugal), 8-11 Oct 2019. `https://www.react.uni-saarland.de/rv2019/`

21. 23rd International Symposium on Formal Methods(FM'19) - Porto (Portugal), 7-11 Oct 2019. `http://formalmethods2019.inesctec.pt`

22. 17th International Conference on Software Engineering and Formal Methods (SEFM'19). Oslo (Norway), 16-20 Sep 2019. `https://sefm2019.inria.fr`

23. 48th Annual Conference of the Southern African Computer Lecturers' Association (SACLA'19) - Northern Drakensberg (South Africa), 15-17 Jul 2019. `http://sacla2019.unisa.ac.za/index.php`

24. 7th International Conference in Formal Methods and Software Engineering (FORMALISE'19). Montreal (Canada), 27 May 2019. (Co-located with ICSE 2019) `http://www.formalise.org/`

25. The 18th International Conference on Runtime Verification (RV'18). Limassol (Cyprus), 10-13 Nov 2018. `https://rv2018.isp.uni-luebeck.de/`

26. 8th International Symposium On Leveraging Applications of Formal Methods, Verification and Validation (ISoLA'18) - Limassol (Cyprus), 5-9 Nov 2018. `http://www.isola-conference.org/isola2018`.

27. Reliable Smart Contracts: State-of-the-art, Applications, Challenges and Future Directions, a track of ISoLA 2018, Limassol (Cyprus), 5 Nov 2018. `https://www.isp.uni-luebeck.de/Isola2018-SmartContracts` **(Co-Chair)**

28. 30th Nordic Workshop on Programming Theory (NWPT'18) - Oslo (Norway), 24-26 Oct 2018. `https://nwpt2018.ifi.uio.no/`

29. 14th International Conference on Integrated Formal Methods (iFM'18). Maynooth (Ireland), 5-7 Sep 2018. `http://ifm2018.cs.nuim.ie/`

30. 3rd VORTEX Workshop on Runtime Verification (co-located with ECOOP'18). Amsterdam (The Netherlands), 16-21 Jul 2018. `https://conf.researchr.org/track/ecoop-issta-2018/vortex-2018-papers`

31. 22nd International Symposium on Formal Methods (FM'18). Oxford (UK), 15-17 Jul 2018. (As part of FLoC 2018, the Federated Logic Conferences.) `http://www.win.tue.nl/~evink/FM2018`

32. 6th International Conference in Formal Methods and Software Engineering (FORMALISE'18). Gothenburg (Sweden), 2 Jun 2018. (Co-located with ICSE 2018) `http://www.formalise.org/`

33. 29th Nordic Workshop on Programming Theory (NWPT'17) - Turku (Finland), 1-3 Nov 2017. `https://research.it.abo.fi/nwpt17/`

34. Second International Workshop on Pre- and Post-Deployment Verification Techniques (PrePost'17). Torino (Italy), 19 Sep 2017. `http://staff.um.edu.mt/afra1/prepost17/`

35. 13th International Conference on Integrated Formal Methods (iFM'17). Torino (Italy), 18-22 Sep 2017. `http://ifm2017.di.unito.it/`

36. The 17th International Conference on Runtime Verification (RV'17). Seattle (USA), 13-16 Sep 2017. `http://rv2017.cs.manchester.ac.uk`

37. 2nd IFIP International Conference on Topics in Theoretical Computer Science (TTCS'17). Tehran (Iran), 12-14 Sep 2017. `http://ttcs.ir/`

38. IEEE International Conference on Software Quality, Reliability, and Security (QRS'17). Prague (Czech Republic), 26-28 Jul 2017. `http://paris.utdallas.edu/qrs17`

39. 2nd VORTEX Workshop on Runtime Verification (co-located with ECOOP'17). Barcelona (Spain), 18-23 Jun 2017. `http://2017.ecoop.org/track/vortex-2017-papers`

40. Software Verification and Testing (SVT'17) —A track of the ACM Symposium on Applied Computing (SAC'17). Marrakech (Morocco), 3-7 Apr 2017 `http://antares.sip.ucm.es/svt2017/`

41. 1st Workshop on Formal Methods on Privacy (co-located with FM'16). Limassol (Cyprus), 8 Nov 2016. `http://fmpriv2016.cs.ucy.ac.cy`

42. 21st International Symposium on Formal Methods (FM'16). Limassol (Cyprus), 7-11 Nov 2016. `http://fm2016.cs.ucy.ac.cy`

43. 28th Nordic Workshop on Programming Theory - Rold Storkro, North Jutland (Denmark), 31 Oct - 2 Nov 2016. `http://nwpt2016.cs.aau.dk/`

44. The 16th International Conference on Runtime Verification (RV'16). Madrid (Spain), 23-30 Sep 2016. `http://rv2016.imag.fr/`

45. 1st VORTEX Workshop on Runtime Verification (co-located with ECOOP'16). Rome (Italy), 17-22 Jul 2016. `http://2016.ecoop.org/track/VORTEX-2016`

46. The 10th International Symposium on Theoretical Aspects of Software Engineering (TASE'16). Shanghai (China), 17-19 Jul 2016. `http://tase2016.ecnu.edu.cn/`

47. 12th International Conference on Integrated Formal Methods (iFM'16). Reykjavik (Iceland), 1-3 Jun 2016. `http://en.ru.is/ifm`
48. 12th International Colloquium on Theoretical Aspects of Computing (ICTAC'15). Cali (Colombia), 29-31 Oct 2015. `http://www.ictac2015.co`
49. 27th Nordic Workshop on Programming Theory - Reykjavik (Iceland), 21-23 Oct 2015. `http://icetcs.ru.is/nwpt2015/`
50. 13th International Conference on Software Engineering and Formal Methods (SEFM'15). York, UK, 7-11 Sep 2015. `http://www.cs.york.ac.uk/sefm2015`
51. First International Conference on Topics in Theoretical Computer Science (TTCS'15). Institute for Research in Fundamental Sciences (IPM). Tehran, Iran, 26-28 Aug 2015. `http://ttcs.ir/`
52. 12th International Conference on Software Engineering and Formal Methods (SEFM'14). Grenoble, France, 1-5 Sep 2014. `http://sefm2014.inria.fr/`
53. 26th Nordic Workshop on Programming Theory - Halmstad (Sweden), 29-31 Oct 2014. `http://ceres.hh.se/mediawiki/index.php/NWPT\_2014`
54. 11th International Conference on Software Engineering and Formal Methods (SEFM'13). Madrid, Spain, 25-27 Sep 2013. `http://antares.sip.ucm.es/sefm2013/`
55. 25th Nordic Workshop on Programming Theory (NWPT'13). Tallin (Estonia), 20-22 November 2013. `http://cs.ioc.ee/nwpt13/`
56. The 10th International Conference on Software Engineering and Formal Methods (SEFM'12). Thessaloniki, Greece, 1-5 Oct 2012. (`http://sefm2012.city.academic.gr/`.
57. 6th Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'12) - Bertinoro, Italy, Sep 2012. `http://www.um.edu.mt/ict/flacos2012/`
58. 24th Nordic Workshop on Programming Theory (NWPT'12) - Bergen, Norway, Oct 2012. `http://nwpt12.ii.uib.no/`
59. 21st Brazilian Symposium on Artificial Intelligence (SBIA 2012). Curitiba, Brazil, 20-25 Oct 2012. `http://www.inf.ufpr.br/bracis2012/SBIA.html`
60. The 9th International Conference on Software Engineering and Formal Methods (SEFM'11). Montevideo, Uruguay, 14-18 Nov 2011. `http://www.fing.edu.uy/inco/eventos/SEFM2011/`. **(PC co-chair)**
61. 5th Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'11) - Málaga, Spain, 22-23 Sep 2011. `http://flacos11.lcc.uma.es/`
62. 8th International Colloquium on Theoretical Aspects of Computing (ICTAC'11) - Johannesburg, South Africa, 31 Aug - 2 Sep 2011. `http://www.ictac.net/ictac2011/`
63. 23rd Nordic Workshop on Programming Theory (NWPT'11) - Västerås (Sweden), 26-28 Oct 2011. `http://www.mrtc.mdh.se/nwpt2011/`
64. 2nd Workshop on Formal Methods in Software Product Line Engineering (FMSPLE'11) - Munich, Germany, Aug 2011.
65. VIII Encontro Nacional de Inteligência Artificial (CSBC'11 - ENIA) - Natal, Brazil, 19-22 Jul 2011. `http://www.dimap.ufrn.br/csbc2011/eventos/enia.php`

66. 4th Workshop on Formal Languages for Contract-Oriented Software Development (FLACOS'10). Pisa, Italy, 18-19 Sep. 2010. `http://www.di.unipi.it/flacos2010`. **(PC co-chair)**

67. First Workshop on Formal Methods in Software Product Line Engineering (FMSPLE 2010). Jeju Island, South Korea, Sep 2010. `http://www.iese.fraunhofer.de/de/veranstaltungen_messen/fmsple/`

68. 22nd Nordic Workshop on Programming Theory (NWPT'10). Turku (Finland), 10-12 Nov 2010. `https://research.it.abo.fi/nwpt10/`

69. XX Brazilian Symposium on Artificial Intelligence (SBIA 2010). São Bernardo do Campo, Brazil, Oct 2010. `http://www.jointconference.fei.edu.br/`

70. The 8th IEEE International Conference on Software Engineering and Formal Methods (SEFM'10). Pisa, Italy, 13-17 Sep 2010. `http://www.iist.unu.edu/sefm2010`

71. 4th Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'10). Pisa, Italy, Sep 2010. `http://www.di.unipi.it/FLACOS2010/`. **(PC co-chair)**

72. 6th International Verification Workshop (VERIFY'10). Edinburgh, UK, 20-21 July 2010.
`http://www.mais.informatik.tu-darmstadt.de/verify2010/`

73. International Workshop on Component and Service Interoperability (WCSI'10). Málaga, Spain, 29 Jun 2010. `http://wcsi10.lcc.uma.es/`

74. 21st Nordic Workshop on Programming Theory (NWPT'09). Lyngby, Denmark, 14-16 Oct 2009. `http://www2.imm.dtu.dk/projects/nwpt09`

75. The 2nd Chilean Workshop on Formal Methods (ChWFM'09). Santiago de Chile, Chile, 9-13 Nov 2009. `http://wfm.usach.cl`

76. 3rd Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'09). Toledo, Spain, 24-25 Sep 2009. `http://www.ifi.uio.no/flacos09/`. **(PC co-chair)**

77. The 7th IEEE International Conference on Software Engineering and Formal Methods (SEFM'09). Hanoi, Vietnam, 23-27 Nov 2009. `http://www.iist.unu.edu/sefm2009`

78. The 3rd IFAC Conference on Analysis and Design of Hybrid Systems (ADHS'09). Zaragoza, Spain. `http://diisconf.cps.unizar.es/adhs09`

79. 2nd Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'08). Malta. `http://www.ifi.uio.no/flacos08/` **(PC co-chair)**

80. The 6th IEEE International Conference on Software Engineering and Formal Methods (SEFM'08). Cape Town, South Africa. `http://www.iist.unu.edu/SEFM08/`

81. 20th Nordic Workshop on Programming Theory (NWPT'08). Tallinn, Estonia.
`http://cs.ioc.ee/nwpt08/`

82. 34th *Conferencia Latinoamericana de Informática* (CLEI'08). Santa Fé, Argentina.
`http://www.clei2008.org.ar/`

83. The 8th Workshop on Runtime Verification (RV'08). Budapest, Hungary.
http://rv08.in.tum.de/
84. 1st Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'07). Oslo, Norway. http://www.ifi.uio.no/flacos07/. (**PC co-chair**)
85. The 19th Nordic Workshop on Programming Theory (NWPT'07). Oslo, Norway.
http://nwpt07.ifi.uio.no/. (**PC co-chair**)
86. 1st Workshop on Formal Techniques for Specification and Analysis of Security (FTSAS'06). Chile. http://www.fing.edu.uy/inco/eventos/ftsas06/
87. The 4th International Workshop on Parallel and Distributed Methods in verifiCation (PDMC'05). Lisbon, Portugal, 10 Jul 2005. http://anna.fi.muni.cz/PDMC/PDMC05/

EDITORIAL ACTIVITIES

- Co-editor of a special issue of the *Journal of Software and System Modeling (SoSyM)*, 14(1): 2015. Springer.
- Co-editor of the book *Software Engineering and Formal Methods*, Lecture Notes in Computer Science, vol. 7041, Nov 2011. Springer.
- Managing Guest Editor of the following special issues of *The Journal of Logic and Algebraic Programming*, Elsevier:
  - 4th Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'10).
  - 3rd Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'09).
  - 2nd Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'08).
  - 2st Workshop on Formal Languages and Analysis of Contract-Oriented Software (FLACOS'07).
  - The 19th Nordic Workshop on Programming Theory (NWPT'07).

EVALUATION ACTIVITIES

- 2023: Evaluator of European ERC grant applications (ERC-2023-COG).
- 2023: Evaluator for career promotion (for full professor) at KTH, Sweden.
- 2021: Evaluator of a specialization (graduate) career in Cybersecurity (*Diploma de Especialización en Ciberseguridad*, ORT University) for the Ministry of Education and Culture (MEC), Uruguay.
- 2018: Member of the evaluation committee for the Argentinian programme for IT education for primary and secondary education (*Program.AR*), *Fundación Manuel Sadosky* and the Ministerio de Ciencia, Tecnología e Innovación Productiva (*Foundation Manuel Sadosky and the Ministry of Science, Technology and Productive Innovation*). Argentina.
- 2017: Evaluator for career promotion (for Associate Professor - *docent*) at Malmö University, Sweden.

- 2015: Member of the evaluation committee for INRIA project-teams. Evaluation panel on *Security and Confidentiality*. Paris, France.
- 2008: Evaluator of an International Collaborative Bilateral Research Grant between Sweden and third countries, submitted to *Vetenskaprådet*, Sweden. (1 project evaluated)
- Since 2007: I have been a researcher and project evaluator for the *Argentinian Research Council* (CONICET), Argentina. (6 evaluations done)
- Since 2006: I have been a project evaluator for the *Fund for Scientific and Technological Research* of the *Ministry of Education, Science and Technology* (FONCYT) of the Argentinian Government. Argentina. (5 projects evaluated)

PROJECT COORDINATION

- Since Jan 2020: *X-LEGAL: Smart Legal Contracts*, funded by The Swedish Research Council (*Vetenskapsrådet*). Reg. Nr. 2019-04951. Budget: 4 MSEK (approx. 400,000 EUR). Duration: 4(+1) years.
- Apr 2019 - Mar 2020: Coordinator (Principal Investigator) for the *STINT Initiation Grant on Runtime Verification for Autonomous Systems*.[5] Partners: University of Gothenburg (Sweden) and Universidad de Buenos Aires (Argentina). Budget: 150,000 SEK (approx. 15,000 EUR)
- Jan 2016 - Dec 2020: *PolUser: Rich User-Controlled Privacy Policies*, funded by The Swedish Research Council (*Vetenskapsrådet*). Reg. Nr. 2015-04154. Budget: 3.963 MSEK (approx. 400,000 EUR). Duration: 4(+1) years. (**Principal Investigator**)
- Aug. 2006 - Dec. 2010 : Coordinator (Principal Investigator) for the Nordunet3 project *COSoDIS: Contract-Oriented Software Development for Internet Services*[6]. Partners: University of Oslo –UiO (Norway), SICS (Sweden) and Aalborg University (Denmark). Budget: 4,800,000 DKK (approx. 645,000 Euros).
- Mar. 1997 - Aug. 1998: Coordinated (locally, at UCPel) the project QaP–FOR *Application of formal methods to the improvement of quality and productivity in software development* (*Aplicação de métodos formais para a melhoria da qualidade e produtividade em software*), financed by FAPERGS (*Fundação de Amparo à Pesquisa do Rio Grande do Sul*). Pelotas, Brazil.

PARTICIPATION IN PROJECTS

- Since Jan 2021 *Enabling Reactive Synthesis through Runtime Verification*, funded by The Swedish Research Council (*Vetenskapsrådet*), Budget: 4 MSEK (approx. 400,000 EUR). Duration: 4(+1) years. (**Co-applicant**)
- Since Jan 2020: *X-LEGAL: Smart Legal Contracts*, funded by The Swedish Research Council (*Vetenskapsrådet*). Reg. Nr. 2019-04951. Budget: 4 MSEK (approx. 400,000 EUR). Duration: 4(+1) years. (**Principal Investigator**)

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[5] `http://www.cse.chalmers.se/~gersch/STINT2019.html`.

[6] `http://folk.uio.no/gerardo/nordunet3/index.shtml`.

- Jan 2016 - Dec 2020: *PolUser: Rich User-Controlled Privacy Policies*, funded by The Swedish Research Council (*Vetenskapsrådet*). Reg. Nr. 2015-04154. Budget: 3.963 MSEK. Duration: 4(+1) years. (**Principal Investigator**)
- Apr 2019 - Mar 2020: *STINT Initiation Grant on Runtime Verification for Autonomous Systems*, funded by STINT: The Swedish Foundation for International Cooperation in Research and Higher Education. Partners: University of Gothenburg (Sweden) and Universidad de Buenos Aires (Argentina). Budget: 150,000 SEK (approx. 15,000 EUR). Duration: 1 year. (**Principal Investigator**; Co-PI at UBA: Sebastián Uchitel). `http://www.cse.chalmers.se/~gersch/STINT2019.html`.
- Dec 2014 - Dec 2018: *Runtime Verification beyond Monitoring (ARVI)*, ICT COST Action IC1402. Duration: 4 years. (**Member of the Management Committee**)
- Jan 2013 - Dec 2017: *Reliable Multilingual Digital Communication: Methods and Applications*, funded by The Swedish Research Council (*Vetenskapsrådet*), Framework Grant: The Digitized Society - Past, Present, and Future, Reg. Nr. 2012-5746. Budget: 17 MSEK. Duration: 5(+1) years. (**Co-applicant**)
- Jan 2012 - Dec 2017: *DataBIn: Data-Driven Secure Business Intelligence*, funded by the Swedish Foundation for Strategic Research (SSF). Reg. Nr. IIS11-0089. Budget: 25 MSEK. Duration: 5(+1) years (**Co-applicant**)
- Jan–Dec 2014: *Assurance as a Service: Upfront Quality and Safety in Continuous Software Engineering*, funded by the Software Center (Chalmers, and the University of Gothenburg). Partners: Volvo Cars, Ericsson, Saab. (**Co-applicant**)
- Jan 2013 – Dec 2016: *StaRVOOrS: Unified Static and Runtime Verification of Object-Oriented Software*, funded by The Swedish Research Council (*Vetenskapsrådet*), Reg. Nr. 2012-4499. Budget: 2.55 MSEK. (**Co-applicant**)
- Nov 2011 – Apr 2012: *DaDeS: Data-driven Decision Support*, funded by Vinnova (*Utmaningsdriven Innovation 2011*, phase A). Budget: 700 000 SEK. (**Co-applicant**)
- Aug 2006 – Dec 2010: *COSoDIS: Contract-Oriented Software Development for Internet Services*, funded by the Nordunet3 consortium. Partners: University of Oslo –UiO (Norway), SICS (Sweden) and Aalborg University (Denmark). Budget: 4.8 MDKK. (**Principal Investigator**)
- Jan 2004 – Mar 2005: Worked in the French project *CASTLES: Static Analyses for Secure Embedded Systems*, funded by RNTL. Academic partners: INRIA Sophia-Antipolis, INRIA/IRISA Rennes; Industrial partners: AQL, Oberthur Card Systems.
- Oct 2002 - Oct 2003: Participated in the European project *ADVANCE*, Contract No. IST–1999–29082. Worked on the verification of infinite-state systems applied to process algebra.
- Oct 1998 - Oct 2001: Participated in the European project ESPRIT-LTR 26270 VHS *Verification of Hybrid systems*. Part of my Ph.D. thesis was supported by this project.

ORGANIZATION (PC CO-CHAIR) OF WORKSHOPS AND CONFERENCES

1. 31 Oct - 2 Nov 2024: *Verification and Learning for Assured Autonomy* (`https://square.itu.dk/verification-and-learning-for-assured-autonomy/`) — track at AISoLA 2024 `https://2024-isola.isola-conference.org/aisola-tracks/`. Crete, Greece (Co-organized with Raúl Pardo, Hazem Torfah and Devdatt Dubhashi)
2. 13 Oct 2021: *Workshop on Ethics, AI, Technology and Society.* Gothenburg, Sweden. `https://www.chalmers.se/en/centres/chair/events/Pages/Seminars-on-Ethics,-AI,-Technology-and-Society.aspx`
3. 26 Aug 2019: *STINT (UBA-GU) Workshop on Runtime Verification and Autonomous Systems.* Gothenburg, Sweden. `http://www.cse.chalmers.se/~gersch/STINT-workshop.html`
4. 5 Nov 2018: *Reliable Smart Contracts: State-of-the-art, Applications, Challenges and Future Directions* (`http://www.isp.uni-luebeck.de/Isola2018-SmartContracts`) — track at ISoLA 2018 `http://www.isola-conference.org/isola2018/tracks.html`. Limassol, Cyprus (Co-organized with Martin Leucker and César Sánchez)
5. 3 Sep 2018: *Workshop on Privacy & Security & Privacy* (associated with the EU COST action ARVI). Sicily, Italy `https://www.cost-arvi.eu/?page_id=1431` (Co-organized with Leonardo Mariani)
6. 17 Mar 2017: *Workshop on Legal Contract Analysis* (associated with the EU COST action ARVI). Prague, Czech Republic `https://www.cost-arvi.eu/?page_id=862`. (Co-organized with Christian Colombo and Gordon Pace)
7. Nov 2011: *The 9th International Conference on Software Engineering and Formal Methods* (SEFM'11). Montevideo, Uruguay. (Co-organized with Alberto Pardo and Gilles Barthe)
8. 17-18 Sep 2010: *4th Workshop on Formal Languages for Contract-Oriented Software Development* (FLACOS'10). Pisa, Italy.
9. 24-25 Sep 2009: *3rd Workshop on Formal Languages for Contract-Oriented Software Development* (FLACOS'09). Toledo, Spain.
10. 27-28 Nov 2008: *2nd Workshop on Formal Languages for Contract-Oriented Software Development* (FLACOS'08). Malta.
11. 10-12 Oct 2007: *19th Nordic Workshop on Programming Theory* (NWPT'07). Oslo, Norway.
12. 9-10 Oct 2007: *1st Workshop on Formal Languages for Contract-Oriented Software Development* (FLACOS'07). Oslo, Norway.
13. 6-8 Nov 1996: 1st Symposium in Informatics. University Campus of Vacaria, University of Caxias do Sul, Brazil.

RECENT REFEREEING ACTIVITIES[7]

– International workshops and conferences: Cassis'04, CAV'04, FMICS'04, PDMC'05, FSTTCS'05, HSCC'06, FMOODS'06 (2), FM'06, FCS-ARSPA'06, ATVA'06,

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[7] I am listing here only the review activities done between 2004 and 2018.

Bytecode'07, FORTE'07, ATVA'07, FLACOS'07 (5), NWPT'07, RV'08 (3), FMOODS'08, ICALP'08, SEFM'08 (5), NWPT'08 (7), FLACOS'08 (6), iFM'09, FASE'09, FMOODS/FORTE'09, ADHS'09 (6), FLACOS'09 (4), SEFM'09 (5), ChWFM'09 (3), NWPT'09 (8), WCSI'10, VERIFY'10 (2), SEFM'10 (10), FLACOS'10, SBIA'10, NWPT'10 (7), FMSPLE'10 (3), CSBC– ENIA'11 (2), ICTAC'11 (3), FLACOS'11 (2), NWPT'11 (8), SBIA'12 (2), SEFM'12 (4), FLACOS'12 (2), NWPT'12 (4), NWPT'13 (4), SEFM'13 (4), SEFM'14 (6), NWPT'14 (4), SEFM'15 (3), TTCS'15 (4), NWPT'15 (6), ICTAC'15 (5), TASE'16 (2), iFM'16, ISoLA'16, RV'16, iFM'17, QRS'17 (2), SAC-SVT'17 (3), TTCS'17 (2), RV'17 (2), PrePost'17 (2), NWPT'17 (2), FM'18 (2), iFM'18 (3), FormaliSE'18, ISoLA'18 (6), RV'18 (3), NWPT'18 (5), VORTEX'18, SEFM'19 (4), RV'19 (4), FM'19 (5), FormaliSE'19 (4), RV'20 (4), SEFM'20 (4), FormaliSE'20 (3), ISoLA'20 (4), SEFM'21 (4), RV'21 (3) ISoLA'22, SEFM'22 (5), RV'22 (2), FormaliSE'23 (3), RV'23 (3), ICTAC'23 (3), RV'24 (2), ICTAC'24 (4) and more...

– Journals:
  • Software and Systems Modeling (2023);
  • ...
  • International Journal on Software Tools for Technology Transfer (Springer), 2015;
  • Formal Aspects of Computing (Springer), 2011, 2015 (2);
  • Transactions on Software Engineering (TSE, IEEE), 2006;
  • Theoretical Computer Science (Elsevier), 2007, 2008;
  • Journal of Logic and Algebraic Programming (Elsevier), 2008 (2);
  • Mathematical Structures in Computer Science (Cambridge Univ. Press), 2008.

– (Chapters in) Books:
  • The Handbook of Computer Networks (Publisher: John Wiley & Sons, Inc.), 2006;
  • The Handbook of Technology Management (Publisher: John Wiley & Sons, Inc.), 2008.

ACADEMIC AWARDS

– Aug. 1994: got an academic award as the best student of the 1992/1993 Information System Engineering generation course. Universidad Tecnológica Nacional. Concepción del Uruguay, Argentina.

WORK EXPERIENCE[8] Industry

– Mar 1991 - Mar 1994: Worked as System Analyst in systems design and implementation in Paylana S.A. (Textile Industry - Paysandú, Uruguay).

Academic

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[8] See Appendix B for a more detailed description. All the jobs listed here were full-time positions.

- Since Jul 2009: Permanent full-time position at the Department of Computer Science and Engineering, Chalmers | University of Gothenburg, Sweden.[9] *Full Professor* in Computer Science, since Jul 2014.
- Jan 2009 – Dec 2011: Part-time position as Associate Professor (*førsteamanuensis*) at the Department of Informatics, University of Oslo, Norway.
- Since Apr 2010: Associated Researcher (*Investigador Asociado –Ad honorem*) to the Uruguayan National Research & Innovation Agency (*Asociación Nacional de Investigación e Innovación —ANII*), Uruguay.
- Jan 2005 – Dec 2008: Full time researcher –with 25% of "compulsory service", including teaching obligations– at the PMA group at the Department of Informatics, University of Oslo.
- Apr. 2004 – Mar. 2005: Worked as a researcher at IRISA/INRIA (CNRS contract –*Chargé de recherche* CR2, CDD). Rennes, France. Worked on verification of Smart Java Cards.
- Jan. 2004 - Apr. 2004: INRIA postdoctoral researcher at IRISA/INRIA. Rennes, France. Worked on verification of Smart Java Cards.
- Oct. 2002 - Oct. 2003: Researcher (*Forskare*) at the Department of Information Technology, Uppsala University. Uppsala, Sweden. Worked on verification of infinite–state systems and process algebra.
- Aug. 1997 - Jul. 1998: Assistant Professor (*Professor Adjunto*) in Computer Science at UCPel. Pelotas, Brazil. Besides the teaching activities I was involved in the (co)supervision of many undergraduate students.
- Mar. 1997 - Aug. 1997: Visiting Lecturer (*Professor Visitante*) in Computer Science at UCPel. Pelotas, Brazil.
- Mar. 1996 - Feb. 1997: Coordinator of 'Tecnólogo em Processamento de Dados' course at Núcleo Universitário de Vacaria at UCS. Caxias do Sul, Brazil.
- Mar. 1996 - Feb. 1997: Assistant Professor (*Professor Adjunto*) in Computer Science at UCS. Caxias do Sul, Brazil.

SCHOLARSHIPS

- Oct. 1998 - Jul. 2002: Got a scholarship to work on the ESPRIT project 26270 (VHS, Verification of Hybrid System) to get a PhD degree at VERIMAG (France).
- Mar. 1994 - Mar. 1996: Got a scholarship to get my M.Sc. degree in Computer Science at UFRGS (Universidade Federal do Rio Grande do Sul) in Brazil.
- Mar. 1990 - Oct. 1990: Got a scholarship at E.S.L.A.I. (Escuela Superior Latino-Americana de Informática) in La Plata, Argentina.
- Mar. 1988 - Mar. 1990: Got a scholarship in 'Plan Constelación' to teach Informatics for High School teachers at U.T.N. (Universidad Tecnológica Nacional) in Concepción del Uruguay, Argentina.

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[9] I've been Associate Professor (*Universitetslektor*) at the Department of Applied IT Jul 2009–Jul 2010. Till Dec 2011 I have been at the Software Engineering division; have joined the Software Technology division in Jan 2012. Passed the habilitation (*Docent*) in Oct 2010.

FELLOWSHIPS

– Sep. 1997 - Mar. 1998: Worked on Design Techniques for Real-Time Systems using Duration Calculus as a UNU/IIST[10] research fellow in Macau. In particular, I have used an extension of Duration Calculus to give a compositional semantics to the Verilog HDL.

POPULAR WRITING

– *Can Computer Reason about Legal Documents?* Talk at Gothenburg Science Festival (*Vetenskapsfestivalen*), April 2019. `http://vetenskapsfestivalen.se/for-alla/program/event/21981`
– I have written a note about model checking, intended for the general public. See `http://folk.uio.no/gerardo/model-checking/What-is-Model-Checking.html`.

RESEARCH VISITS AND INVITED TALKS[11]

– 16-17 May 2024: Visited Ass.Prof. Raúl Pardo at IT Univ. Copenhagen, Denmark. Gave a talk on "On the Specification and Analysis of Normative Contracts."
– 15-20 Apr 2024: Visited Prof. Cesar Sanchez at IMDEA Software, Madrid, Spain. Gave a talk on "On the Specification and Analysis of Normative Contracts."
– 4-8 Mar 2024. Lorentz Center on *Contract Languages*. Leiden, The Netherlands. Gave a talk on "On the Specification and Analysis of Normative Documents."
– 24-27 May 2023: Visited Prof. Holger Hermanns at Saarland University, Saarbrücken, Germany. Gave a talk on "Runtime Verification Meets Controller Synthesis."
– 1-4 May 2023: Visited Profs. Patrizio Pelliccione and Emilio Tuosto at GSSI, L'Aquila, Italy. Gave a talk on "Runtime Verification Meets Controller Synthesis."
– 15-21 Jul 2022: Visited Prof. Martin Leucker at Lübeck University, Germany. Gave a talk on "Monitor-Triggered Temporal Logic."
– 3-12 Apr 2022: Visited Prof. Cesar Sanchez at IMDEA Software, Madrid, Spain. Gave a talk on "Towards a Framework for Specifying and Realizing Correct–by–Construction Contextual Robotic Missions."
– 31 Oct - 7 Nov 2021: Visited Prof. Cesar Sanchez at IMDEA Software, Madrid, Spain. Gave a talk on "Monitor-Triggered Temporal Logic."
– 19 Oct - 4 Nov 2019: Visited Prof. Sebastián Uchitel at UBA (*Universidad de Buenos Aires*), Argentina. Worked on the use of Runtime Verification for UAVs; gave a talk on "Smart Contracts: What are they? Open Issues and Link to the Real World."

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[10] United Nations University / International Institute for Software Technology
[11] Does not include the talks given in Conferences or Workshops.

- 18-29 Mar 2019: Visited Prof. Sergio Yovine at ORT, Montevideo, Uruguay. Gave a mini-course on the *Specification and Verification of Normative Documents*, as well as many talks at ORT, as well as in industry, on Privacy and Smart Contracts.
- 9-22 Dec 2018: Visited Ass. Prof. Fernando Schapachnik at UBA (*Universidad de Buenos Aires*), Argentina. Worked on the formalization of normative documents with real-time.
- 5 Dec 2018: Visited University of the Republic (UdelaR), Montevideo, Uruguay. Gave a talk on "Privacy by Design and Data Minimization".
- 4 Dec 2018: Visited ICT4V, Montevideo, Uruguay. Gave a talk on "Smart Contracts: Current State, Applications, Open Issues and Connections with the Real World". `https://ict4v.org/events/smart-contracts-cuan-inteligentes-son-y-como-vin`
- 3 Dec 2018: Visited ORT (in connection with Blockchain Summit), Montevideo, Uruguay. Gave a talk on "Smart Contracts: Current State, Applications, Open Issues and Connections with the Real World". `https://www.meetup.com/es-ES/BitcoinBlockchainUruguay/events/256615906/`
- 4-11 Jul 2018: Visited Ass. Prof. César Sánchez at IMDEA Software, Madrid, Spain. Worked on smart contracts. Gave a talk on "Monitoring Data Minimization and Other Similar Hyperproperties".
- 1-11 Dec 2017: Visited Ass. Prof. Fernando Schapachnik at UBA (*Universidad de Buenos Aires*), Argentina. Worked on the formalization of normative documents with real-time.
- 26 Nov - 5 Dec 2015: Visited Prof. Gordon Pace's group at the University of Malta, in the context of the EU COST action ARVI. Worked on privacy policies, runtime monitoring, and contract automata.
- 16-19 Mar 2015: Shonan seminar on Static Analysis meets Runtime Verification. Shonan, Japan. Gave a talk on "A framework for static and runtime verification".
- 23-27 Feb 2015: Visited Dr. Daniel Le Métayer at INRIA Rhône-Alpes, France. Worked on privacy issues.
- 28 April – 03 May 2013: Dagstuhl Seminar *VaToMAS - Verification and Testing of Multi-Agent Systems*. Schloss Dagstuhl, Germany. Gave a talk on "On the specification and analysis of contracts (normative texts)"
- 26 Nov - 07 Dec 2012: Visited Prof. Alberto Pardo's group at University of the Republic (UdelaR), Uruguay. Gave a mini-course on "Specification and Verification of Electronic Contracts" (15 hours).
- 22 Jul - 4 Aug 2012: Visited Dr. Sergio Yovine at UBA (*Universidad de Buenos Aires*), Argentina. Worked on "Specification and Analysis of Contracts".
- 20 Aug. - 17 Sep. 2011: Visited Dr. Daniel Le Métayer at INRIA Rhône-Alpes, France. Worked on formal methods and risk analysis. Gave a talk on "Towards a framework to analyze contracts in natural language".
- 13 Aug - 03 Sep 2010: Visited Dr. Gregor Goessler at INRIA Rhône-Alpes, France. Worked on BIP and contracts. Gave a talk on "Challenges in the Specification of Contracts".

- 7-12 Jan 2010: Visited Dr. Gordon Pace's group at the University of Malta, Malta.
- 10 Dec 2009: Visited Dr. Frank van der Linden at Philips Healthcare. Best, The Netherlands. Discussed issues related to Software Product Lines.
- 19-25 Apr. 2009 : Visited Prof. Valentín Valero Ruiz at Universidad de Castilla–La Mancha. Albacete, Spain. Gave a mini-course (4 hs) on the "Specification and Analysis of Contracts" and other two related talks.
- 25-30 Apr. 2009 : Visited Prof. Antonio Maña at Universidad de Málaga. Málaga, Spain. Gave a talk on "Challenges in the Specification of Contracts".
- 11-16 Jan. 2009 : Visited Dr. Gilles Barthe at IMDEA Software. Madrid, Spain.
- 25 Jun. – 06 Jul. 2008: Visited Dr. Gordon Pace's group at the University of Malta, Malta.
- 6 – 14 May 2008: Visited Prof. Luca de Alfaro at Univ. of California at Santa Cruz, and Univ. of California at Berkeley, USA. Gave a talk in each university on the "Specification and analysis of electronic contracts".
- 6 Mar. 2008: Gave the talk "Specification and analysis of electronic contracts" at SINTEF. Oslo, Norway.
- 3–22 Dec. 2007: Visited Prof. Alberto Pardo's group at University of the Republic (UdelaR), Uruguay. Gave a mini-course on Model Checking (15 hours).
- 26 Nov. – 2 Dec. 2007: Visited Andrés Pascal's group at National Technical University (UTN), Argentina. Gave the tutorial "Use of contracts to govern Internet services exchange" (4 hours).
- 19–25 Nov. 2007: Visited Prof. Héctor Cancela's group at University of the Republic (UdelaR), Uruguay. Gave the talk "Specification and verification of contracts".
- 12–18 Nov. 2007: Visited Prof. Victor Braberman's University of Buenos Aires (UBA), Argentina. Gave the talk "Specification and verification of contracts".
- 5–11 Nov. 2007: Visited Dr. Marcelo Campo's group at UNICEN, Argentina.
- 23 Jul. - 02 Aug. 2007: Visited Dr. Gordon Pace's group at the University of Malta, Malta. Gave a talk on "Towards a formal language for writing e-contracts".
- 16-23 Jul. 2007: Visited Dr. Julian Bradfield's group (LFCS) at the University of Edinburgh, Edinburgh, Scotland. Gave a talk on "Towards a formal language for writing e-contracts".
- 12-13 Jul. 2007: Visited Prof. Marek Sergot's group at Imperial College, London, UK.
- 03-12 Jun. 2006: Visited Pablo Giambiagi's group at SICS, Stockholm, Sweden.
- 12-22 Apr. 2006: Visited Dr. Gordon Pace's group at the University of Malta, Malta. Gave a talk on "Memory consumption analysis for smart cards".
- 20 Dec. 2005 - 07 Jan. 2006: Visited Pablo Giambiagi's group at SICS, Stockholm, Sweden.

- 21-28 Feb. 2005: Visited Pablo Giambiagi's group at SICS, Stockholm, Sweden.
- 6-8 Dec. 2004: Visited Dr. Gilles Barthe's group at INRIA - Sophia Antipolis, France.
- 29 Nov. - 3 Dec. 2004: Visited Dr. Sergio Yovine's group at VERIMAG, Grenbole, France.
- 12-15 Oct. 2004: Visited Prof. Olaf Owe's group at the Department of Informatics, the University of Oslo. Gave a talk on "Memory analysis for Java smart cards".
- 10-17 Jul. 2004: Visited Prof. Eugene Asarin at LIAFA - University of Paris 7, France.
- 01-15 Dec. 2003: Visited UCPel (*Universidade Católica de Pelotas*), Pelotas, Brazil. Gave the following talks and mini-courses:
    - "Introduction to hybrid systems"
    - "Algorithmic analysis of polygonal hybrid systems"
    - "Computing invariance kernels of polygonal hybrid systems"
    - "On the expressiveness of CCS-like calculi"
    - Mini-course (12 hours): "Models of concurrency"
- 16-30 Nov. 2003: Visited UFRGS (*Universidade Federal do Rio Grande do Sul*) and PUCRS (*Pontifiicia Universidade Católica do Rio Grande do Sul*), Porto Alegre, Brazil. Gave the following talks: "An heuristic for verifying safety properties of infinite-state systems" and 'Algorithmic analysis of polygonal hybrid systems".
- 8-15 Oct. 2003: Visited Prof. Ron van der Meyden's group at National ICT Australia (NICTA), Sydney, Australia. Gave a talk on "Algorithmic analysis of polygonal hybrid systems".
- 1-8 Sep. 2002: Visited Prof. Parosh Abdulla's group at the Department of Information Technology, Uppsala University. Uppsala, Sweden. Gave a talk on "Algorithmic analysis of polygonal hybrid systems".
- 12-20 Aug. 2002: Visited Dr. Wan Fokkink's group at CWI. Amsterdam, The Netherlands. Gave a talk on "Algorithmic analysis of polygonal hybrid systems".
- 11-13 Aug. 2002: Visited Prof. Veronique Bruyère's group at the Institute of Computer Science, University of Mons-Hainaut. Mons, Belgique. Gave a talk on "Algorithmic analysis of polygonal hybrid systems".
- 1-5 Apr. 2002: Visited Prof. Rajeev Alur's group at the Department of Computer and Information Science, University of Pennsylvania. Philadelphia, USA. Gave a talk on "Algorithmic analysis of polygonal piecewise constant differential inclusions".
- 28 Mar. 2002: Visited Dr. Michael Lowry's group at the Automated Software Engineering Group, NASA Ames Research Institute. Moffet Field (CA), USA. Gave a talk on "Algorithmic analysis of polygonal piecewise constant differential inclusions".
- 21-23 Mar. 2002: Visited Prof. Pravin Varaiya's group at the Electrical Engineering and Computer Science Deparment, Berkeley University. Berkeley (CA), USA. Gave a talk on "Algorithmic analysis of polygonal piecewise constant differential inclusions".

– 5 Nov. 1998: Gave a talk on "Formal Semantics of Verilog using Duration Calculus", at VERIMAG. Dr. Joseph Sifakis' group. Grenoble, France.

INVITED TUTORIALS AND COURSES AT SCHOOLS[12]

– Invited mini-course on *Specification and Verification of Normative Documents*. Duration: 15h. ORT, Montevideo, Uruguay. 18-29 March, 2019.
– Invited lecture on *Monitoring data minimization and other similar hyperproperties* at 2nd ARVI COST School on Runtime Verification. Duration: 1 h. Praz sur Arly, France. 19-21 Mar 2018. URL: `https://www.cost-arvi.eu/?page_id=1163`.
– Invited mini-course on *Specification and verification of electronic contracts* at the associated school to the 10th International Conference on Software Engineering and Formal Methods (SEFM School). Duration: 5 hs. Thessaloniki, Greece. 24-28 Sep 2012. URL: `http://sefm.iist.unu.edu/School/`
– Invited course on *Languages and tools to specify and verify electronic contracts* at the *Escuela de Ciencias Informáticas*) at the Universidad de Buenos Aires. Duration: 15 hs. Buenos Aires, Argentina. 23-27 Jul 2012. URL: `http://www.dc.uba.ar/events/eci/2012/cursos`
– Invited mini-course on *Specification and verification of e-contracts* at the associated school to the 6th IEEE International Conference on Software Engineering and Formal Methods (SEFM School). Duration: 10 hs. Cape Town, South Africa. Nov 2008. URL: `http://www.iist.unu.edu/SEFM08/School`
– Invited course on the *Application of formal methods to Web services and to the formalization of contracts* within the doctoral programme *Advanced Technologies in Informatics*. Department of Informatics, University of Castilla-La Mancha. Duration: 10 hs. Albacete, Spain. Apr 2009.

OTHER ACADEMIC EXPERIENCE (Teaching assistance, etc.)

– See Appendix C.

LANGUAGES

– Spanish: First language.
– Portuguese: Fluent.
– French: Fluent.
– English: Fluent.
– Swedish: Good.
– Italian: Good.
– Norwegian: Reading and listening: Good; Speaking and Writing: Basic[13].

OTHER INTERESTS

I have sporadically been teaching Argentinian tango. My main spare activity nowadays is to spend time with my daughter Sofía and my son Sebastián. Besides, my main interests are to:

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[12] Does not include the talks given in Conferences or Workshops.

[13] I've passed the exam of the highest level of *Norsk for internasjonale studenter, trinn 3* (UiO), and the Bergen test.

- Read books about popular science, general literature (classics, Latin-American, French, etc), politics and economy, philosophy, and tango.
- Dance and practise tango.
- Listen to music: tango, jazz, world music, Brazilian popular music.
- Play football.
- Watch alternative movies.
- Do trekking and ski.

A   Gerardo Schneider: Publication List

Books

1. M. Roggenbach, A. Cerone, B. Schlingloff, G. Schneider, and S. A. Shaikh. *Formal Methods for Software Engineering - Languages, Methods, Application Domains*. Texts in Theoretical Computer Science. An EATCS Series. Springer, 2022.

Edited Books and Journals[14,15]

1. Gilles Barthe, Alberto Pardo, and Gerardo Schneider, editors. *Software Engineering and Formal Methods*, volume 14 of *Journal of Software and System Modeling (SoSyM)*. Springer, February 2015.
2. Gilles Barthe, Alberto Pardo, and Gerardo Schneider, editors. *Software Engineering and Formal Methods*, volume 7041 of *Lecture Notes in Computer Science*. Springer, November 2011.
3. Antonio Brogi and Gerardo Schneider, editors. *Special Section: Formal Languages and Analysis of Contract-Oriented Software (FLACOS'10)*, volume 81(2) of *Journal of Logic and Algebraic Programming*. Elsevier, February 2012.
4. Einar B. Johnsen, Olaf Owe, and Gerardo Schneider, editors. *Special Issue: The 19th Nordic Workshop on Programming Theory (NWPT 2007)*, volume 78(7) of *Journal of Logic and Algebraic Programming*. Elsevier, August/September 2009.
5. Olaf Owe and Gerardo Schneider, editors. *Special Issue: Formal Languages and Analysis of Contract-Oriented Software (FLACOS'07)*, volume 78(5) of *Journal of Logic and Algebraic Programming*. Elsevier, May/June 2009.
6. Gordon Pace and Gerardo Schneider, editors. *Special Issue: Formal Languages and Analysis of Contract-Oriented Software*, volume 80(3-5) of *Journal of Logic and Algebraic Programming*. Elsevier, April-July 2011.
7. Gordon Pace and Gerardo Schneider, editors. *Special Issue: Formal Languages and Analysis of Contract-Oriented Software (FLACOS'08)*, volume 80(1) of *Journal of Logic and Algebraic Programming*. Elsevier, January 2011.

Journal Papers

1. Gerardo Schneider. Computing invariance kernels of polygonal hybrid systems. *Nordic Journal of Computing*, 11(2):194–210, 2004.
2. Eugene Asarin, Gerardo Schneider, and Sergio Yovine. Algorithmic Analysis of Polygonal Hybrid Systems. Part I: Reachability. *Theoretical Computer Science*, 379(1-2):231–265, 2007.
3. Eugene Asarin, Gordon Pace, Gerardo Schneider, and Sergio Yovine. Algorithmic Analysis of Polygonal Hybrid Systems. Part II: Phase Portrait and Tools. *Theoretical Computer Science*, 390(1):1–26, January 2008.

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[14] All the publications can be downloaded from my homepage: `http://www.cse.chalmers.se/~gersch/`.

[15] Till 2013 authors are listed alphabetically in almost all my publications, following the French tradition in formal methods, not reflecting the contribution of each author. Due to different publication policies by some of my co-authors the exception to the above are the following 3 papers: the 2013 IEEE TSE journal paper by G. Díaz et al., and the FLACOS'11 and IEEE SCC'10 papers by E. Martínez et al. From 2014, due to a change of publication policies, papers are not necessary in alphabetic order. A co-author contribution statement may be provided upon request.

4. Eugene Asarin, Venkatesh Mysore, Amir Pnueli, and Gerardo Schneider. Low dimensional hybrid systems - decidable, undecidable, don't know. *Information and Computation*, 211:138–159, January 2012.

5. Cristian Prisacariu and Gerardo Schneider. A dynamic deontic logic for complex contracts. *Journal of Logic and Algebraic Programming*, 81(4):458–490, May 2012.

6. Krasimir Angelov, John J. Camilleri, and Gerardo Schneider. A framework for conflict analysis of normative texts written in controlled natural language. *Journal of Logic and Algebraic Programming*, 82(5-7):216–240, July-October 2013.

7. Hallstein Hansen, Gerardo Schneider, and Martin Steffen. Reachability analysis of complex planar hybrid systems. *Science of Computer Programming (SCP)*, 78(12):2511–2536, 2013.

8. Gregorio Díaz, M. Emilia Cambronero, Enrique Martínez, and Gerardo Schneider. Specification and Verification of Normative texts using C-O Diagrams. *IEEE Transactions on Software Engineering*, 40(8):795–817, 2014.

9. Shaun Azzopardi, Gordon J. Pace, Fernando Schapachnik, and Gerardo Schneider. Contract Automata: An Operational View of Contracts Between Interactive Parties. *Artificial Intelligence and Law*, 24(3):203–243, September 2016.

10. Wolfgang Ahrendt, Mauricio Chimento, Gordon Pace, and Gerardo Schneider. Verifying Data- and Control-Oriented Properties Combining Static and Runtime Verification: Theory and Tools. *Formal Methods in System Design*, 51(1):200–265, August 2017.

11. John J. Camilleri and Gerardo Schneider. Modelling and analysis of normative documents. *Journal of Logical and Algebraic Methods in Programming*, 91:33–59, October 2017.

12. Raúl Pardo, Musard Balliu, and Gerardo Schneider. Formalising privacy policies in social networks. *Journal of Logical and Algebraic Methods in Programming*, 90:125–157, August 2017.

13. Lara Ortiz-Martin, Pablo Picazo-Sanchez, Pedro Peris-Lopez, Juan Tapiador, and Gerardo Schneider. Feasibility analysis of inter-pulse intervals based solutions for cryptographic token generation by two electrocardiogram sensors. *Future Generation Comp. Syst.*, 96:283–296, 2019.

14. César Sánchez, Gerardo Schneider, Wolfgang Ahrendt, Ezio Bartocci, Domenico Bianculli, Christian Colombo, Yliés Falcone, Adrian Francalanza, Srdan Krstić, Dejan Nickovic, Gordon J. Pace, Jose Rufino, Julien Signoles, Dmitriy Traytel, and Alexander Weiss. A Survey of Challenges for Runtime Verification from Advanced Application Domains (Beyond Software). *Formal Methods in System Design*, 54(3):279–335, August 2019. Open source, freely available at https://rdcu.be/bOhjI.

15. Hanaa Alshareef, Raúl Pardo, Pablo Picazo-Sanchez, and Gerardo Schneider. A collaborative access control framework for online social networks. *Journal of Logical and Algebraic Methods in Programming*, 114, May 2020.

16. Pablo Picazo-Sanchez, Juan Tapiador, and Gerardo Schneider. After you, please: Browser extensions order attacks and countermeasures. *International Journal of Information Security*, 19(6):623–638, 2020.

17. Viktor Elliot, Jonas Flodén, Conny Overland, Zeeshan Raza, Miroslaw Staron, Johan Woxenius, Abhinayan Basu Bal, Trisha Rajput, Gerardo Schneider, and Gunnar Stefansson. Ceos' understanding of blockchain technology and its adoption in export-oriented companies in west sweden: a survey. *Journal of Global Operations and Strategic Sourcing*, 17(4):661–684, 2021.

18. Sandro Stucki, César Sánchez, Gerardo Schneider, and Borzoo Bonakdarpour. Gray-box monitoring of hyperproperties with an application to privacy. *Formal Methods in System Design*, 58(1-2):126–159, 2021.

19. Hamed Arshad, Christian Johansen, Olaf Owe, Pablo Picazo-Sanchez, and Gerardo Schneider. Semantic attribute-based encryption: A framework for combining ABE schemes with semantic technologies. *Information Sciences*, 616:558–576, 2022.

20. William Hughes, Tobias Magnusson, Alejandro Russo, and Gerardo Schneider. Cheap and secure metatransactions on the blockchain using hash-based authorisation and preferred batchers. *Blockchain: Research and Applications*, December 2022. In Press, available online.

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Dissemination Articles

1. P. Giambiagi, O. Owe, A. P. Ravn, and G. Schneider. Contract-oriented software development for internet services. In *ERCIM News – Special: The Future WEB*, number 72, pages 47–48. January 2008.

Other Contributions

1. Gerardo Schneider and Laira V. Toscani. Fixed point theory in computer science. Anais do CNMAC, Curitiba, Brazil, August 1995. (Extended abstract, in Portuguese).

2. Gerardo Schneider and Rafael Accorsi. Introduction to linear logic. Primeiro Workshop sobre Métodos Formais e Qualidade de Software, Porto alegre, Brazil, July 1996. (In Portuguese).

3. Gerardo Schneider and Antônio C. da Rocha Costa. Sequential and parallel computation strategies on coherence spaces. CLEI'96, Bogotá, Colombia, June 1996.

4. Gerardo Schneider and Antônio C. da Rocha Costa. Coherence space as event structure and concrete data structure. XXIV SEMISH, Brasilia, Brazil, August 1997.

5. Pablo Giambiagi, Gerardo Schneider, and Frank D. Valencia. A note on scope and infinite behaviour in CCS-like calculi. NWPT'2003, Turku, Finland, October 29–31 2003. Extended Abstract.

6. Gerardo Schneider. Computing invariance kernels of polygonal hybrid systems. NWPT'2003, Turku, Finland, October 29–31 2003. Extended Abstract.

7. Gerardo Schneider. Memory usage estimation for java cards. NWPT'2004, Uppsala, Sweden, October 06–08 2004. Extended Abstract.

8. Gordon Pace and Gerardo Schneider. Improving polygonal hybrid systems reachability analysis through the use of the phase portrait. CSAW'06, Malta, 2006.

9. Cristian Prisacariu and Gerardo Schneider. Towards model checking contracts. NWPT'07/FLACOS'07 Workshop Proceedings, Oslo, Norway, October 9–10 2007. Extended Abstract.

10. Stephen Fenech, Gordon J. Pace, and Gerardo Schneider. Conflict Analysis of Deontic Contracts. NWPT'08, Tallinn, Estonia, November 19–21 2008. Extended Abstract.

11. Hallstein A. Hansen and Gerardo Schneider. On the reachability analysis of planar, non-linear autonomous systems using hybrid systems. NWPT'09, Lyngby, Denmark, October 2009. Extended Abstract.

Technical Reports

1. Gerardo Schneider. Using induction for algorithm design. Technical report, Dissertation for Engineering Degree. Facultad Regional Concepción del Uruguay - UTN, Concepción del Uruguay, Argentina, December 1992. (In Spanish).

2. Gerardo Schneider. An algebraic specification language. Technical report, CPGCC da UFRGS, Porto Alegre, Brazil, July 1994. (In Portuguese).

3. Gerardo Schneider. Fixed point theory in Computer Science. Technical report, CPGCC da UFRGS, Porto Alegre, Brazil, January 1995. (In Portuguese).

4. Pablo Giambiagi and Gerardo Schneider. A Verilog specification of STARI. Technical report, UNU/IIST, P.O.Box 3058, Macau, February 1998.

5. Gerardo Schneider and Xu Qiwen. Towards a Formal Semantics of Verilog using Duration Calculus. Technical Report 133, UNU/IIST, P.O.Box 3058, Macau, February 1998.

6. Gerardo Schneider and Xu Qiwen. Towards an Operational Semantics of Verilog. Technical Report 147, UNU/IIST, P.O.Box 3058, Macau, October 1998.

7. Eugene Asarin, Gerardo Schneider, and Sergio Yovine. On the decidability of the reachability problem for planar differential inclusions. Technical report, VERIMAG, Grenoble, France, January 2001.

8. Gerardo Schneider. Invariance kernels of polygonal differential inclusions. Technical Report 2003-042, Department of Information Technology, Uppsala University, August 2003.

9. Michael Baldamus, Richard Mayr, and Gerardo Schneider. A backward/forward strategy for verifying safety properties of infinite-state systems. Technical Report 2003-065, Department of Information Technology, Uppsala University, January 2004.

10. Pablo Giambiagi, Gerardo Schneider, and Frank D. Valencia. On the expressiveness of CCS-like calculi. Technical Report 2004-002, Department of Information Technology, Uppsala University, Sweden, January 2004.

11. Gerardo Schneider. A constraint-based algorithm for analysing memory usage on java cards. Technical Report RR-5440, INRIA, December 2004.

12. Gerardo Schneider. Towards computing phase portrait objects of polygonal hybrid systems on surfaces. Technical Report 331, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, March 2005.

13. Pablo Giambiagi, Olaf Owe, Anders P. Ravn, and Gerardo Schneider. Contract-based internet service software development: A proposal. Technical Report 333, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, January 2006.

14. Gordon Pace and Gerardo Schneider. Static analysis of SPDIs for state-space reduction. Technical Report 336, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, April 2006.

15. Einar B. Johnsen, Olaf Owe, and Gerardo Schneider. NWPT'07/FLACOS'07 Workshop Proceedings. Technical Report 366, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, October 2007. Editors.

16. Olaf Owe, Gerardo Schneider, and Martin Steffen. Components, objects, and contracts. Technical Report 363, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, August 2007.

17. Olaf Owe, Gerardo Schneider, and Arild Torjusen. Towards integration of XML in the Creol object-oriented language. Technical Report 365, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, October 2007.

18. Gordon Pace, Cristian Prisacariu, and Gerardo Schneider. Model checking contracts –a case study. Technical Report 362, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, August 2007.

19. Cristian Prisacariu and Gerardo Schneider. An Algebraic Structure for the Action-Based Contract Language CL - theoretical results. Technical Report 361, Department of Informatics, University of Oslo, Oslo, Norway, July 2007. Updated March 2008.

20. Cristian Prisacariu and Gerardo Schneider. Towards a formal definition of electronic contracts. Technical Report 348, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, January 2007.

21. Gerardo Schneider. On the decidability of the reachability problem for GSPDIs. Technical Report 359, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, June 2007.

22. Gordon Pace and Gerardo Schneider. Relaxing Goodness is Still Good for SPDIs. Technical Report 372, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, January 2008.

23. Gordon J. Pace and Gerardo Schneider. FLACOS'08 Workshop Proceedings. Technical Report 377, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, October 2008. Editors.

24. Cristian Prisacariu and Gerardo Schneider. CL: A Logic for Reasoning about Legal Contracts —Semantics. Technical Report 371, Oslo, Norway, February 2008.

25. Christian Colombo, Gordon Pace, and Gerardo Schneider. Resource-bounded run-time verification of java programs with real-time properties. Technical Report CS2009-01, Department of Computer Science, University of Malta, December 2009.

26. Gordon J. Pace and Gerardo Schneider. FLACOS'09 Workshop Proceedings. Technical Report 385, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, September 2009. Editors.

27. Hallstein Hansen, Gerardo Schneider, and Martin Steffen. Reachability analysis of complex planar hybrid systems. Technical Report 412, Department of Informatics, University of Oslo, PO Box 1080 Blindern, N-0316 Oslo, Norway, November 2011.

28. John J. Camilleri, Gabriele Paganelli, and Gerardo Schneider. A CNL for Contract-Oriented Diagrams. Technical Report abs/1406.5691, CoRR - arXiv.org, 2014.

29. Thibaud Antignac, David Sands, and Gerardo Schneider. Data Minimisation: A Language-Based Approach (Long Version). Technical Report abs/1611.05642, CoRR - arXiv.org, 2016.

30. John J. Camilleri, Normunds Gruzitis, and Gerardo Schneider. Extracting Formal Models from Normative Texts. Technical Report abs/1607.01485, CoRR - arXiv.org, 2016.

31. John J. Camilleri, Mohammad Reza Haghshenas, and Gerardo Schneider. A Web-Based Tool for Analysing Normative Documents in English. Technical Report abs/1707.03997, CoRR - arXiv.org, 2017.

32. Raúl Pardo, César Sánchez, and Gerardo Schneider. Timed Epistemic Knowledge Bases for Social Networks (Extended Version). Technical Report abs/1708.04070, CoRR - arXiv.org, 2017.

33. Srinivas Pinisetty, Thibaud Antignac, David Sands, and Gerardo Schneider. Monitoring Data Minimisation. Technical Report abs/1801.02484, CoRR - arXiv.org, 2018.

34. Pablo Picazo-Sánchez, Gerardo Schneider, and Juan Tapiador. After you, please: Browser extensions order attacks and countermeasures. Technical Report abs/1908.02205, CoRR - arXiv.org, August 2019.

Dissertations and Thesis

1. Gerardo Schneider. Sequential and parallel computation strategies on coherence spaces. Master's thesis, CPGCC – UFRGS, Porto Alegre, Brazil, March 1996. (In Portuguese).

2. Gerardo Schneider. *Algorithmic Analysis of Polygonal Hybrid Systems*. PhD thesis, VERIMAG – UJF, Grenoble, France, July 2002.

Tools

I have participated in the implementation of the following tools:

- **SPeeDI:** Together with Gordon Pace, I have implemented a verification tool for Polygonal Differential Inclusions (SPDI).
- **SPeeDI$^+$:** Together with Gordon Pace, I have extended the tool SPeeDI for computing phase portrait objects of SPDIs. http://www.cs.um.edu.mt/speedi/

Besides, I have contributed to the conceptual definition and underlying theoretical results for the following tools:

- **AnaCon:** A framework for analysis normative texts written in controlled natural language. `http://www.cse.chalmers.se/~gersch/anacon/`.
- **CLAN:** A tool for automatic detection of conflicts in deontic contracts. Main developer: Stephen Fenech. `http://www.cs.um.edu.mt/svrg/Tools/CLTool`
- **GSPeeDI:** A verification tool for Generalized Polygonal Hybrid Systems (GSPDI). Main developer: Hallstein A. Hansen.
- **LARVA:** A runtime verification platform for runtime verification of critical (real-time) systems. Main developer: Christian Colombo. `http://www.cs.um.edu.mt/svrg/Tools/LARVA/`

B Gerardo Schneider: Work Experience - Detailed Description

Industry

– Mar. 1991 - Mar. 1994: worked as System Engineer in systems design and implementation in Paylana S.A. (Textile Industry - Paysandú, Uruguay). Participated in the development of a Linear Programming model.

Academic

– Since Jul 2009: Permanent full-time position at the Department of Computer Science and Engineering, Chalmers | University of Gothenburg, Sweden.[16] *Full Professor* in Computer Science, since Jul 2014.
These are the courses I have been engaged on since I took the position:
  - Spring 2012-2016: "Model-Based Testing" (DIT848 / DAT260). First year, study period 4, Software Engineering Master programme, Chalmers | University of Gothenburg, Sweden. Credits: 7.5 HEC. Role: Responsible/Lecturer. (30-40 students)
  - Spring 2010-2012: "Test and Verification" (TIG034). 4th semester, Software Engineering bachelor programme, Chalmers | University of Gothenburg, Sweden. Credits: 6 HEC. Role: Coordinator/Lecturer. (65-90 students)
  - Spring 2010, 2011: "Technical Challenge Project" (TIA050). 3rd semester Software Engineering Master programme, Chalmers | University of Gothenburg, Sweden. Credits: 15 HEC. Role: Coordinator/Supervisor. (33-60 students)
  - Fall 2009: "Software Architecture for Distributed Systems – Project" (TIG029). A 3rd semester course on the Software Engineering bachelor programme, Chalmers | University of Gothenburg, Sweden. Credits: 15 HEC. Role: Coordinator/Supervisor. (37 students)
  - Fall 2009: "Industrial Challenge Project" (TIA049). 1st semester, Software Engineering Master programme, Chalmers | University of Gothenburg, Sweden. Credits: 15 HEC. Role: Supervisor. (37 students)
  - Fall 2009: "Seminars in Software Engineering" (TIA051). For 1st semester Master students on the Software Engineering programme, Chalmers | University of Gothenburg, Sweden. Credits: 7.5 HEC. Role: Responsible/Lecturer/Supervisor. (40 students)

– Jan 2009 – Dec 2011: Part-time position as Associate Professor (*førsteamanuensis*) at the Department of Informatics, University of Oslo, Norway. I have taught the following course:

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[16] I've been Associate Professor (*Universitetslektor*) at the Department of Applied IT Jul 2009–Jul 2010. Till Dec 2011 I have been at the Software Engineering division; have joined the Software Technology division in Jan 2012. Passed the habilitation (*Docent*) in Oct 2010.

- Spring 2009: "Specification and verification of parallel systems" (INF5140, *Kravspesifikasjon og verifikasjon av parallelle systemer*). A course for M.Sc. and PhD students. Univ. of Oslo, Norway. Role: Responsible/Lecturer.
- Jan. 2005 – Dec. 2008: Full time researcher –with 25% of "compulsory service", including teaching obligations– at the PMA group at the Department of Informatics, University of Oslo. Courses taught during that period:
  - Fall 2008: "Programming Languages" (INF3110, *Programmeringsspråk*), a 3rd year course on principles (paradigms) of programming languages. Univ. of Oslo, Norway. Role: Lecturer.
  - Spring 2008: "Selected topics on static analysis", INF5906 A course for M.Sc. and PhD students. Univ. of Oslo, Norway. Role: Lecturer.
  - Spring 2007: "Specification and verification of parallel systems" (INF5140). Univ. of Oslo, Norway. Role: Responsible/Lecturer.
  - Spring 2006: "Specification and verification of parallel systems" (INF5140), Univ. of Oslo, Norway. Role: Responsible/Lecturer.
  - Fall 2005: "Programming Languages" (INF3110/4110, *Programmeringsspråk*), Univ. of Oslo, Norway. Role: Lecturer.
- Apr. 2004 – Mar. 2005: Worked as a researcher at IRISA/INRIA (CNRS contract –*Chargé de recherche* CR2, CDD). Rennes, France. Worked on verification of Smart Java Cards.
- Jan. 2004 - Apr. 2004: INRIA postdoctoral researcher at IRISA/INRIA. Rennes, France. Worked on verification of Smart Java Cards.
- Oct. 2002 - Oct. 2003: Researcher (*Forskare*) at the Department of Information Technology, Uppsala University. Uppsala, Sweden. Worked on verification of infinite–state systems and process algebra.
- Aug. 1997 - Jul. 1998: Assistant Professor (*Professor Adjunto*) in Computer Science (Bacharelado em Ciência da Computação). Area: Computation Theory at UCPel (Universidade Católica de Pelotas) in Pelotas, Brazil. Besides the teaching activities I was involved in the (co)supervision of many undergraduate students. I taught the following courses, for which I was the responsible and sole lecturer (I gave the theoretical lectures, and also the practical part)[17]:
  - Aug. 1997 - Dec. 1997:
    * Data Structures (*Estrutura de dados*), 68 hours
    * Formal Languages and Automata Theory (*Linguagens formais e autômatos*), 3 groups, 34 hours each
    * Algebraic Structures for Computer Science (*Estruturas algébricas para Computação*), 68 hours
  - Mar. 1998 - Jul. 1998:
    * Discrete Systems I (*Sistemas discretos I*), 68 hours
    * Discrete Systems II (*Sistemas discretos II*), 2 groups, 51 hours each
- Mar. 1997 - Aug. 1997: Visiting Lecturer (*Professor Visitante*) in Computer Science (Bacharelado em Ciência da Computação). Area: Computation Theory at UCPel (Universidade Católica de Pelotas) in Pelotas, Brazil.

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[17] From September 1997 till end of February 1998 I was a research fellow at UNU/IIST, hence I was dispensed of my teaching obligations at the University.

- Mar. 1996 - Feb. 1997: Coordinator of 'Tecnólogo em Processamento de Dados' course at Núcleo Universitário de Vacaria, U.C.S. (Universidade de Caxias do Sul) in Caxias do Sul, Brazil.
- Mar. 1996 - Feb. 1997: Assistant Professor (*Professor Adjunto*) in Computer Science (Bacharelado em Ciência da Computação). Area: Computation Theory at U.C.S. (Universidade de Caxias do Sul) in Caxias do Sul, Brazil. I taught the following courses, for which I was the responsible and sole lecturer (I gave the theoretical lectures, and also the practical part):
    - Mar. 1996 - Jul. 1996:
        * Programming (*Programação de Computadores*), 60 hours
        * Theory of Computing (*Teoria da Computação*), 60 hours
    - Jul. 1996 (Summer Course):
        * Programming (*Programação de Computadores*), 60 hours
    - Aug. 1996 - Dec. 1996:
        * Logics for Computer Science (*Lógica para Computação*), 60 hours
        * Graph Theory (*Teoria de Grafos*), 60 hours
        * Programming (*Programação de Computadores*), 60 hours
        * Theory of Computing (*Teoria da Computação*), 60 hours
        * Formal Specification of Software (*Especificação Formal de Software*), 60 hours

C   Gerardo Schneider: Other Academic Experience

– Jan. 2001 - Apr. 2001: Tutor in a Computability course given by Prof. Eugene Asarin at UJF (Université Joseph Fourier), Grenoble, France.
– 26 Jun. 2000 - 07 Jul. 2000: Assistant on
  - "Model Checking", by Prof. Edmund M. Clarke (Carnegie Mellon University);
  - "Synchronous Programming for Reactive Systems", by Dr. Pascal Raymond (VERIMAG).
  At INRIA/CEA/EDF *École d'été de Méthodes Formelles* (Summer School on Formal Methods). Château Le Bréau, France.
– Mar. 1987 - Feb. 1994: Tutor at the System Engineer course at U.T.N. (Universidad Tecnológica Nacional) in Concepción del Uruguay, Argentina. Subjects:
  - Apr. 1993 - Dec. 1993: Tutor in Computing IV (*Ayudante de 2da Interino en Computación IV*)
  - Feb. 1992 - Dec. 1993: Tutor in Models and Simulations II (*Ayudante de 2da Interino en Modelos y Simulación II*)
  - May 1991 - Mar. 1993: Tutor in Computing II (*Ayudante de 2da Interino en Computación II*)
  - Jun. 1989 - Mar. 1990: Tutor in Calculus II (*Ayudante de 2da Interino en Análisis Matemático II*)
  - Mar. 1987 - Jun. 1988: Tutor *ad-honorem* in Programming I (*Ayudante de 2da Ad-honorem en Programación I*)
  - Mar. 1987 - Mar. 1988: Tutor *ad-honorem* in Organisational Structure (*Ayudante de 2da Ad-honorem en Estructura de las Organizaciones*)